

HUB ELECTRIC CO.



Presenting —

Footlights
Borderlights
Cove Troughing
Spotlights
Olivettes
Stage Pockets
Aisle Lights
Signs
Flood Lights

HUB ELECTRIC CO.
2219-29 W. Grand Avenue
CHICAGO, ILL.

BULLETIN NO. 50

NEW YORK SALES OFFICE

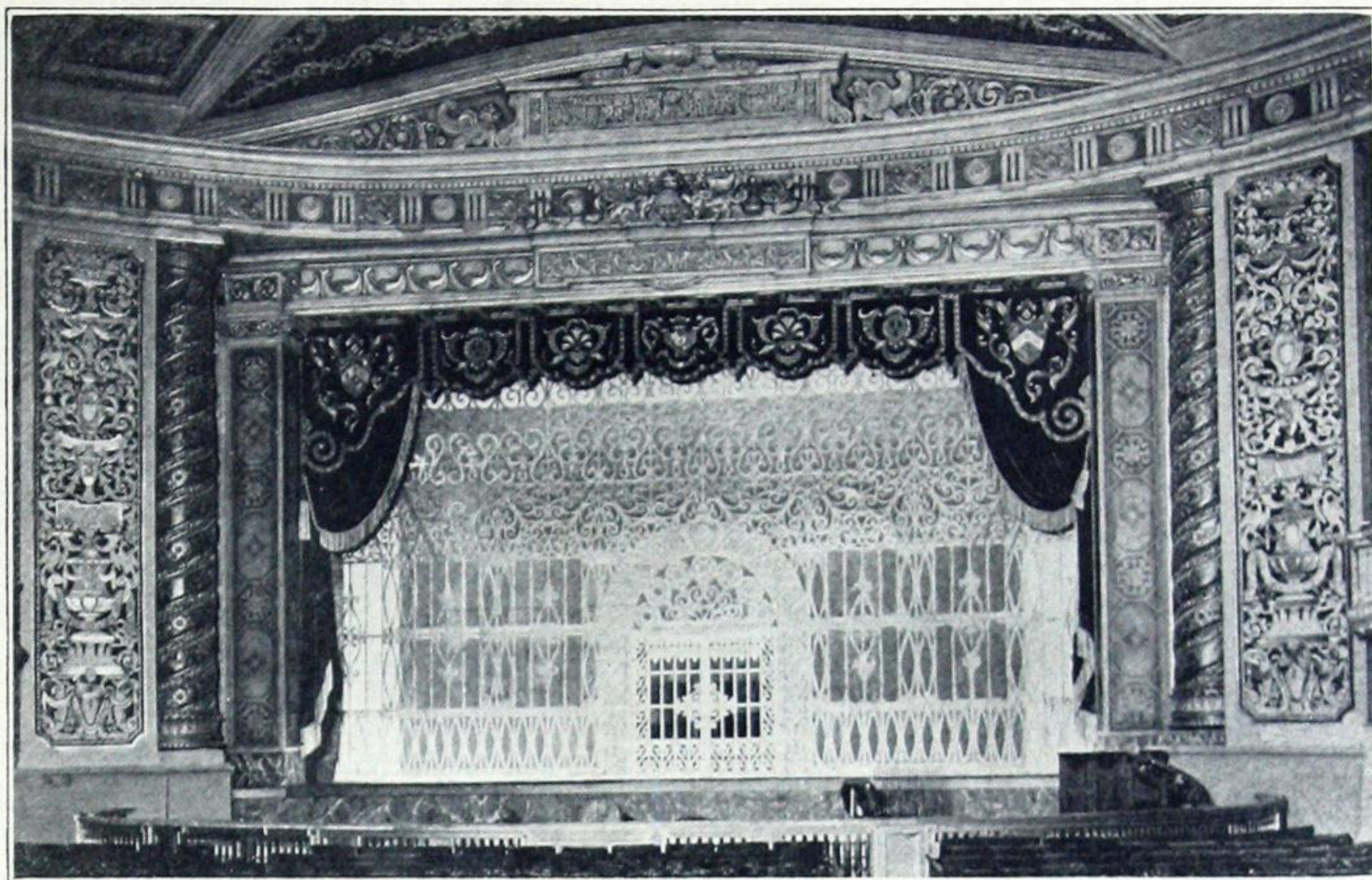
ROOM 807 BROKAW BLDG.
42nd and BROADWAY. - Phone WISCONSIN 4843
J. H. ROHS, Dist. MGR.

Hub Bulletins

- 50 Theatre Lighting Equipment
- 51 Stage Control Boards
- 52 Panel Boards
- 53 Power and Light Switch-
boards
- 54 Signal Systems
- 55 Theraputic, Diagnostic, and
Dental Lamps

IN the development of better theatre lighting equipment the HUB ELECTRIC COMPANY has always maintained a leadership that has stood unchallenged. To the vision gained from many years of experience as one of Chicago's leading theatre electrical contractors, with many outstanding installations throughout the country to its credit, has been added the skill of the best illuminating specialists that could be obtained and the ingenuity of the most resourceful electrical engineers that were available. The cumulative result is one of inestimable value to the electrical world. The Hub Electric Company's well-known stage control board (Locke system) startled the industry and revolutionized the old ideas of theatre lighting control. It has been copied and imitated, but it still stands foremost today as the successful realization of ideals for a perfect stage control board.

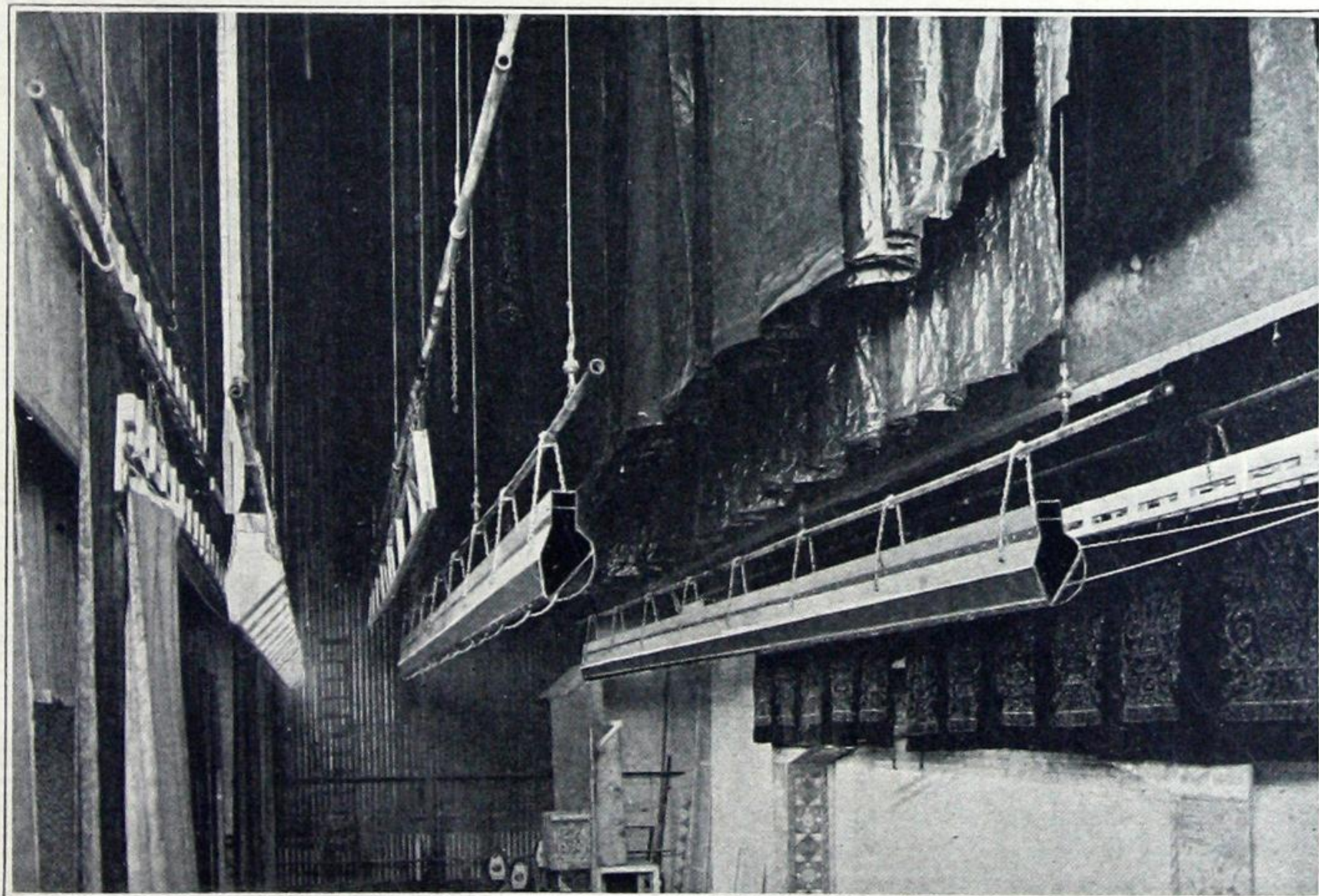
As a result of further research work new ideas in stage lighting equipment have been developed from time to time, with the result that the lighting equipment listed herein marks a distinct step forward, a new epoch in theatre lighting, wherein



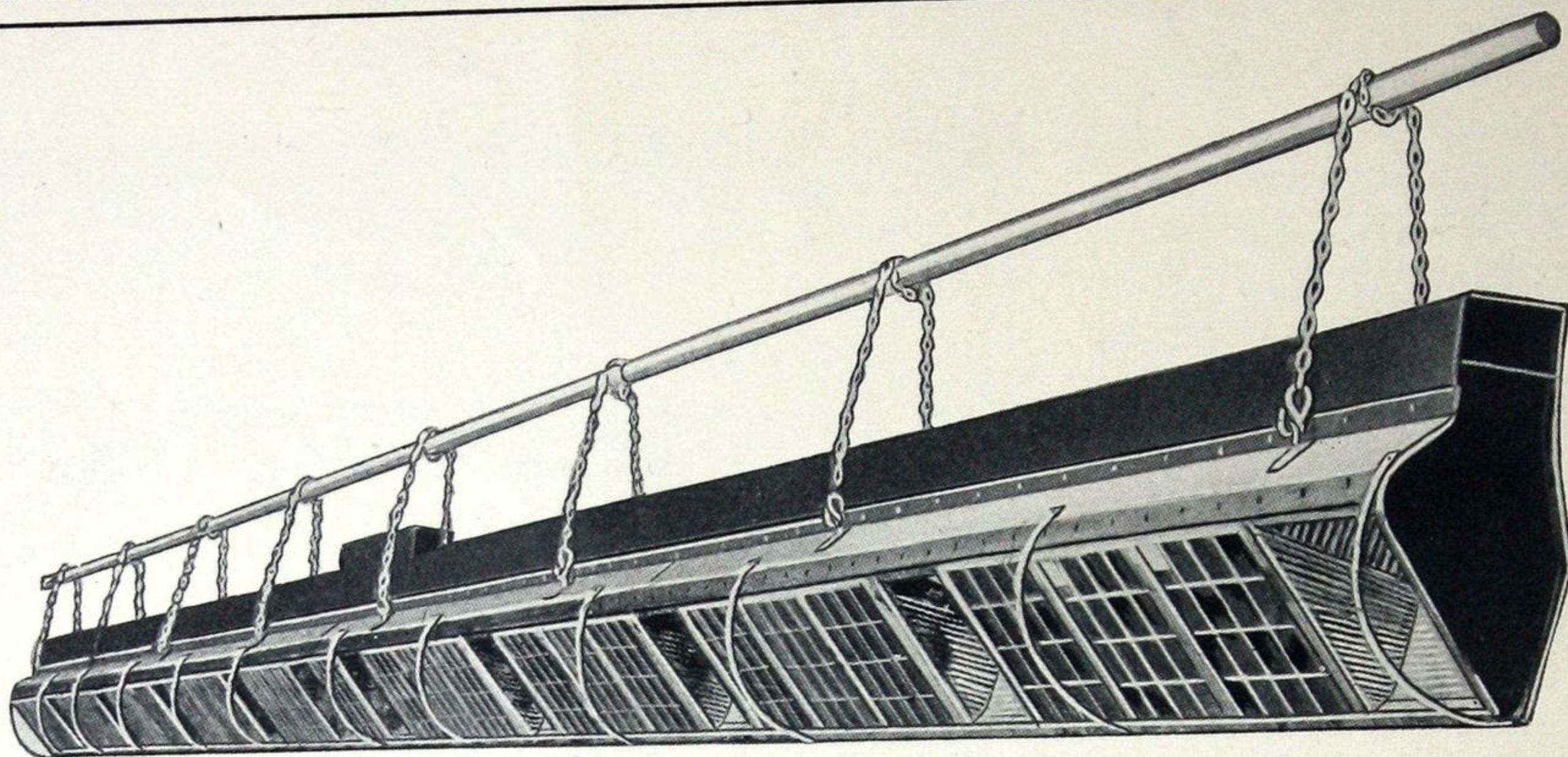
the scientist, the engineer, and the color artist have worked together to produce equipment which is more effective, easily handled, and more nearly approaching real efficiency than has ever been attempted before.

Only the best material approved by the National Board of Fire Underwriters is used in this equipment. It is manufactured and assembled in our modern up-to-date plant by thoroughly trained and experienced workmen, every one of whom is indubitably and thoroughly impressed with the thought of keeping his work up to the high standing set for all HUB ELECTRIC COMPANY products.

A group of trained men, specialists in their particular field, is at the call of every engineer dealing with the modern theatre problems, to cooperate and assist to any extent in the selection of equipment for their particular needs. This is just a part of our service, a part carried on by enthusiastic, conscientious trained men, which has made friends for the HUB ELECTRIC COMPANY throughout the world.



The Electrical Folks for Theatrical Folks



Hub-O-Lite

TYPE C BORDERS

OUR HUB-O-LITE borders of the compartment type, using type C lamps, are scientifically constructed to give a maximum amount of light at the least possible cost for current, maintenance and lamp renewals. Leading theatres have installed them and have found them eminently satisfactory.

They are made of a compact, well ventilated design, with a symmetrical contour to prevent the stage drops and hangings fouling on them. The total overall width is only 9½ inches. The housing is unsurpassed for lightness and rigidity. It is constructed of No. 20 gauge galvanized steel, finished on the outside with heat-resisting enamel. The lamps are spaced on 12-inch centers each lamp placed in a separate compartment arranged for 300 to 500 watt type C lamps, and each compartment provided with guides for gelatine color screens or HUB-O-LITE non-breakable glass color screens.

The reflector is the most efficient ever developed for this type of equipment, and is the result of exhaustive research work in our laboratory. It is constructed of a special mirror metal, guaranteed not to chip, peel or discolor. It is easily cleaned and restored to its original luster by a damp cloth. A recent test showed that at an angle of 40 degrees from a vertical 1600 candle power was obtained from one of these units, using one 300 watt type C lamp; while a similar unit equipped with an aluminum finished reflector gave only 900 candle power. Curves of these tests are shown on page 5.

All HUB-O-LITE borderlights, unless otherwise specified, are furnished with one work light in the center of the border, wired on a separate circuit. Additional work lights, or work lights with a 200 watt reflector, pointing upwards from the top of the border, can be furnished at additional cost if specified. The cable connecting box is placed in the center of the housing, but will be furnished at either end if desired.

LIST PRICES

Type C border, Cat. No. 200, complete with Mogul base sockets, properly wired for circuits and colors as specified, with chain hangers, strain insulators, but without color screens, per foot \$10.00.

Type C border, Cat. No. 201, complete with Mogul base sockets, chain hangers and strain insulators, not wired and not equipped with color screens, per foot \$9.35.

Type C border, Cat. No. 202, complete with Mogul sockets, properly wired for circuits and three colors complete with chain hangers, strain insulators and HUB-O-LITE GLASS COLOR SCREENS, per foot \$12.50.

Type C border, Cat. No. 203, complete with Mogul base sockets, properly wired for circuits and colors as specified, complete with chain hangers, strain insulators and gelatine color screens, per foot \$12.00.

Battens, rigging and lamps not furnished with the above equipment.

Efficiency of Hub-O-Lite Type C Borders

ON this page are curves showing the results of actual laboratory tests on three different types of borderlights using 300 watt type C Lamps. Among these, curve No. 1, is our HUB-O-LITE type C border, equipped with our new mirror metal reflector. This marks the latest advance in reflector design in which a unit has been developed that possesses the high efficiency characteristics of silver mirror without those characteristics that make silver mirror undesirable.

This mirror metal is made of a non-corrosive rustproof, metallic base, covered and impregnated on the reflecting surface with another metal of secret formula, the whole being combined into one heterogeneous mass by a secret process that produces a surface of great brilliancy. It is not affected by heat, or other causes that ordinarily tarnish polished surfaces.

The very nature of it precludes the possibility of it breaking, chipping, peeling or turning yellow—characteristics that are typical of silver mirror or steel enameled reflectors. It is very light and flexible, and when applied to cove troughing and similar equipment provides a simple and effective way of controlling the light diffusion and direction.

It requires no special polish or cleaning fluid. A damp cloth or a little whiting is sufficient. The reflector of a lighting unit that generates considerable heat needs occasional cleaning to keep it at its maximum efficiency, and we recommend that this reflector be kept clean.

This reflector more nearly approaches maximum efficiency than any other type in theatrical use today. Actual laboratory tests which prove the superiority of this reflector are illustrated in the accompanying charts. This new reflector will mean better and brighter lights, with less cost for upkeep and operation.

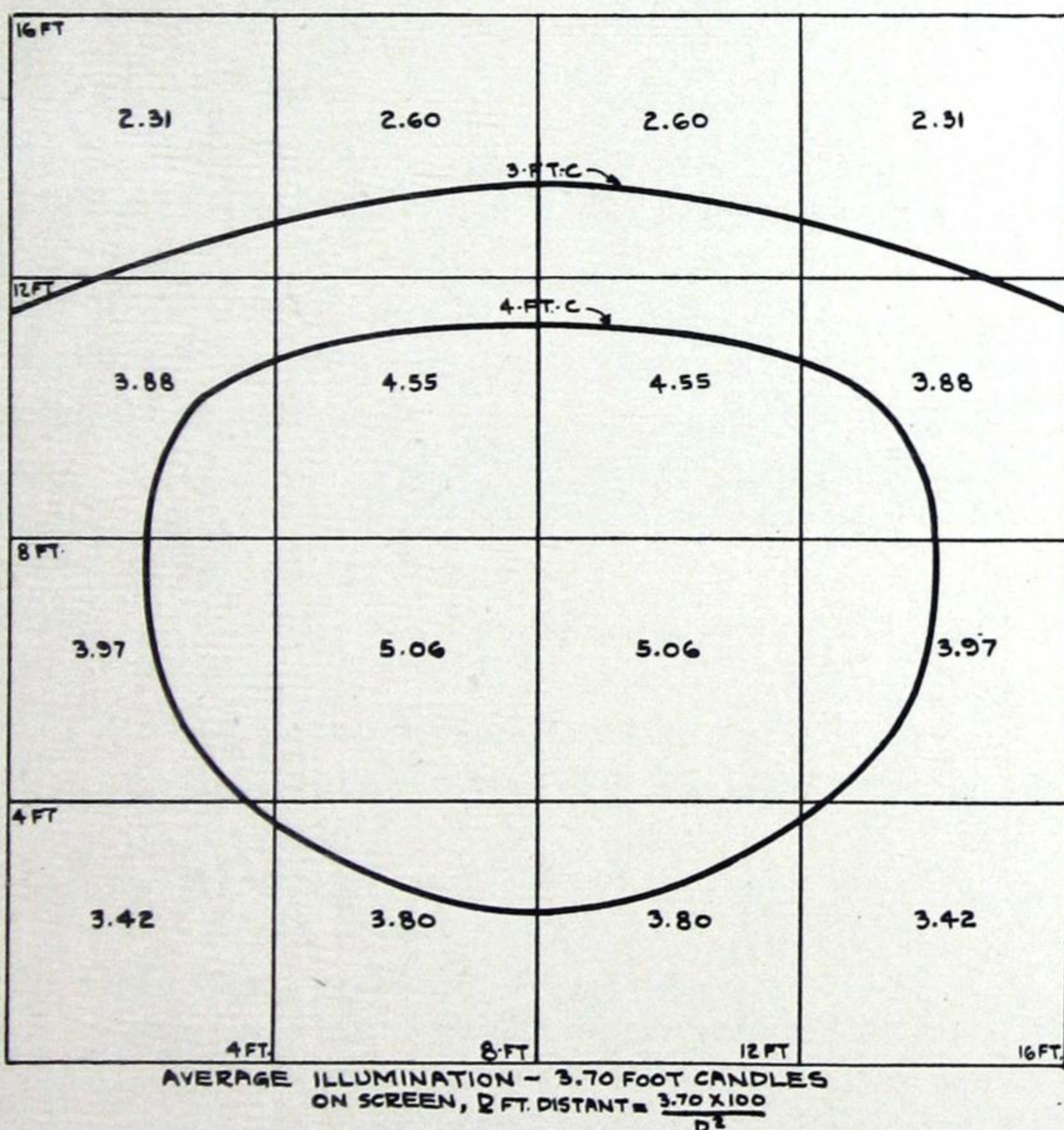


Fig. B

Figure B shows light distribution of Curve No. 1 in Figure A, on a flat surface, one light unit being placed in the same relationship to a screen sixteen feet square as a border light bears to a stage drop. The unit was ten feet away from the screen and eighteen feet from the floor. Note the even distribution of light, and that the maximum candle power comes at a working plane three and a half to six feet above the floor. The shape and size of the light curves are such that with a row of them result in very brilliant illumination.

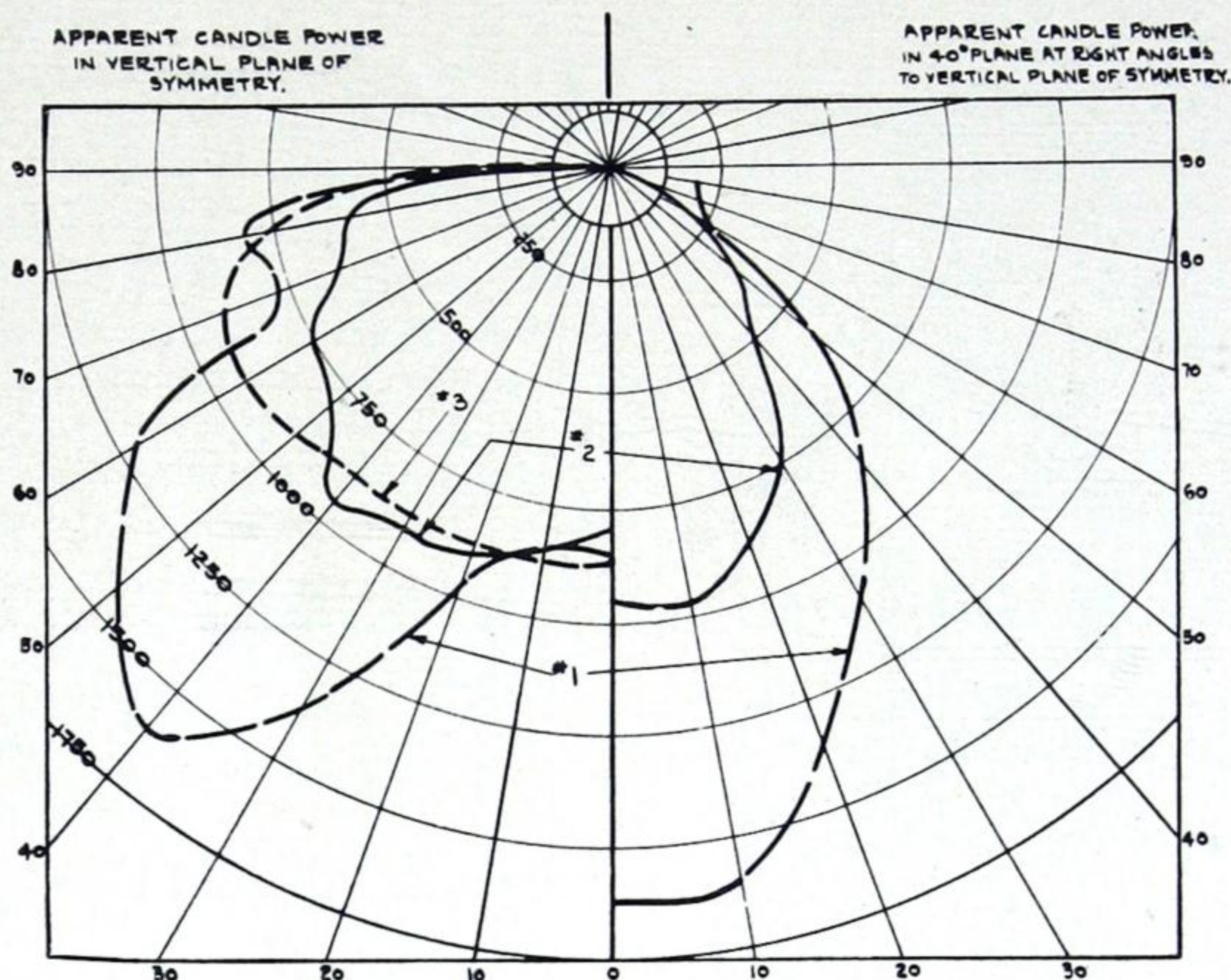


Fig. A

EQUIPMENT

All equipment taken from stock, one lamp only burning for the tests. Curve 1—HUB-O-LITE type C border mirror metal reflector. Curve 2—Standard type C border with aluminum bronze reflectors. Curve 3—Standard type C border with white enameled steel reflector.

LAMPS

Same lamp used in all tests, rated at 300 watt, type C, PS-35, 5000 lumens, 115 volts.

CURVES

Two sets were taken for two units, one for the other.

Left curves show indicated candle power in vertical plane of symmetry; or, in other words, the indicated candle power on various points on an arc with a radius of ten feet swung up and down around the border light, with the light as the center.

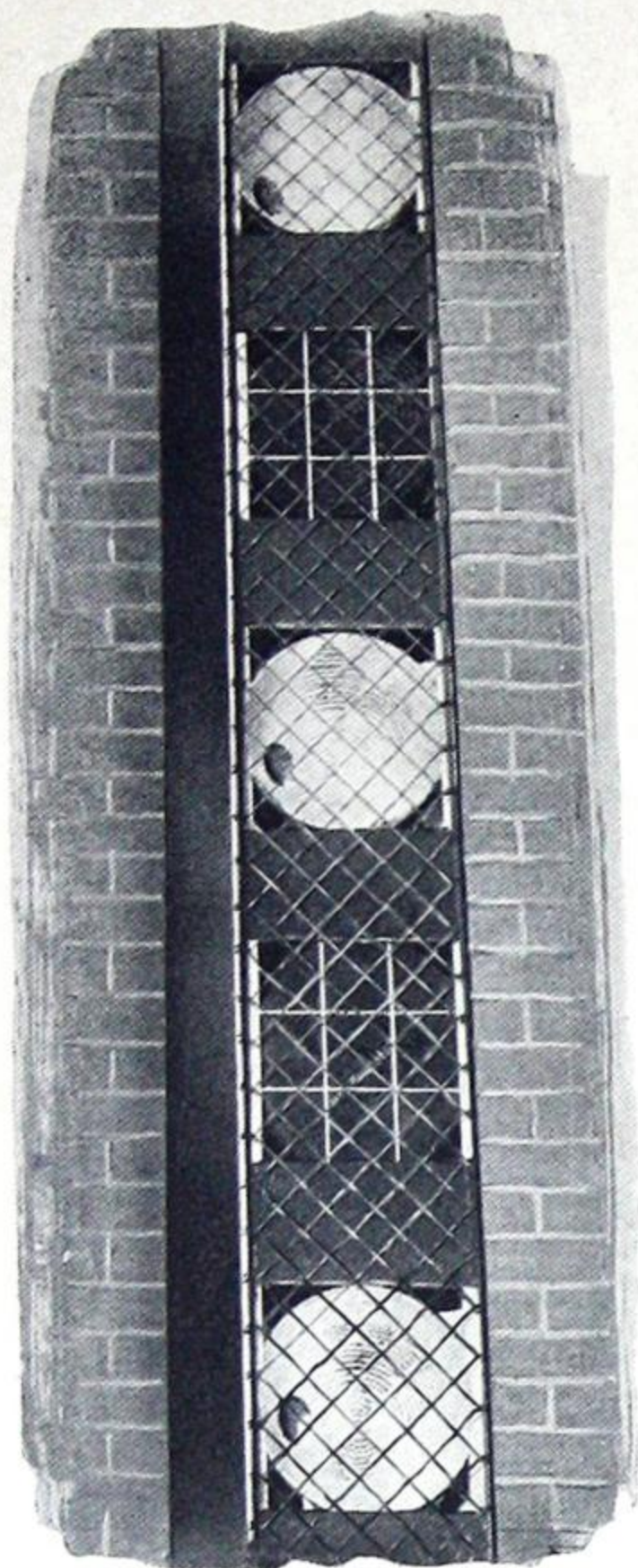
Right curves show indicated candle power in the plane of maximum light swung at right angles to the vertical plane of symmetry; or, in other words, the indicated candle power on the various points of an arc with a radius of ten feet, swung along the length of the border at the angle from the vertical that the previous set of curves indicated the maximum candle power to be located on.

RESULTS—MAXIMUM CANDLE POWER

Border No. 1, maximum candle power 1600 c. p. at 40° from the vertical. Border No. 2, maximum candle power 950 c. p. at 40° from the vertical. Border No. 3, maximum candle power 890 c. p. at 40° from the vertical.

RESULTS—ILLUMINATION

Border No. 1, 3.7 foot candles average over 256 square feet. Border No. 2, 2.6 foot candles average over 256 square feet. Border No. 3, 2.8 foot candles average over 256 square feet.



Proscenium Strips

HUB-O-LITE type C proscenium strips satisfactorily solve the problem of securing additional illumination in the first entrance, especially on a large stage where present day demands require a large volume of light.

They are solidly built of No. 20 gauge galvanized iron, and are of the same construction which have proven so satisfactory in our type C borderlights. A heavy wire mesh, equipped with hinges and a simple latching device, protects the lamp bulbs and color screens and a hinge enables the entire unit to be swung from the wall for flexibility in directing the light. A splicing compartment is furnished at one end of the strip. Slides are provided for color frames.

According to actual candle power delivered upon the stage, it is the most efficient in use today. The reflectors are designed for 150 watt to 300 watt type C lamps, on 12-inch centers, and are of mirror metal, the same as used in our type C borders. This metal is guaranteed to retain its original characteristics indefinitely.

LIST PRICES

Unit complete, with sockets for colors, as shown, circuits per specifications, but not including rigging, lamps or color screens:

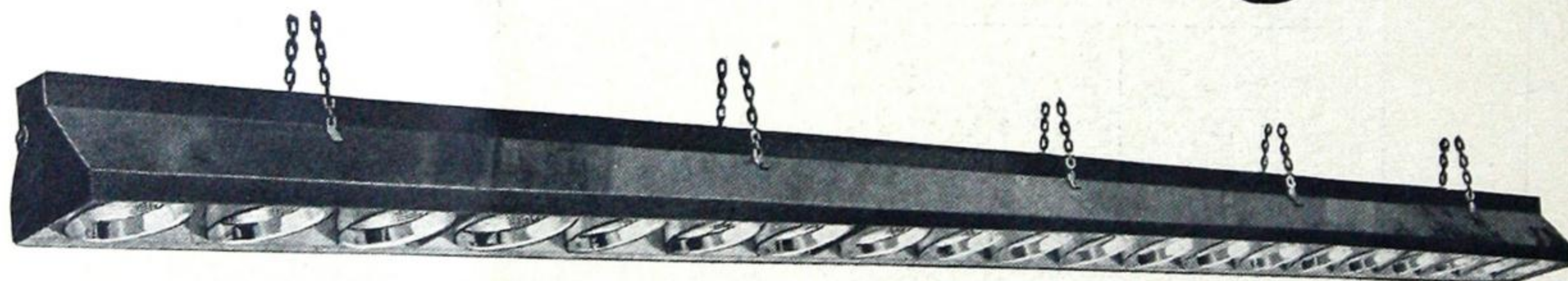
Proscenium strips, Cat. No. 600, equipped for 150 watt type C bulbs, wired, per foot \$12.50

Proscenium strips, Cat. No. 601, equipped for 150 watt type C bulbs, not wired, per foot \$11.85.

Proscenium strips, Cat. No. 602, equipped for 300 watt type C bulbs, wired, per foot \$13.00.

Proscenium strips, Cat. No. 603, equipped for 300 watt type C bulbs, not wired, per foot \$12.35.

Valance Borderlight



THE HUB-O-LITE valance border is of the same sturdy material used in our regular type C border. It is of the compartment type but is specifically designed to throw all the light directly down to the floor, and is particularly efficient for brilliantly illuminating the front of the stage.

The reflectors are mounted on 8 and 12-inch centers, designed for use with 200 and 300 watt type C lamps. They are made of our new mirror metal, giving an intensely brilliant light. They are easily cleaned and will indefinitely retain their efficiency. Guides for color screens are provided.

The wiring box for the cable connections is regularly furnished in the center, but can be provided at either end. A work light in the center of the border, on a separate circuit, is provided.

LIST PRICES

Valance border, Cat. No. 210, with medium base sockets, on 8-inch centers, wired for circuits as per specifications, per foot, \$10.75.

Valance border, Cat. No. 211, with medium base sockets, on 8-inch centers, not wired, per foot, \$9.90.

Valance border, Cat. No. 212, with Mogul base sockets, on 12-inch centers, wired for circuits as per specifications, per foot, \$10.00.

Valance border, Cat. No. 213, with Mogul base sockets, on 12-inch centers, not wired, per foot, \$9.35.

Furnished complete with chain hangers and strain insulators, but no lamps, battens, rigging or color screens.

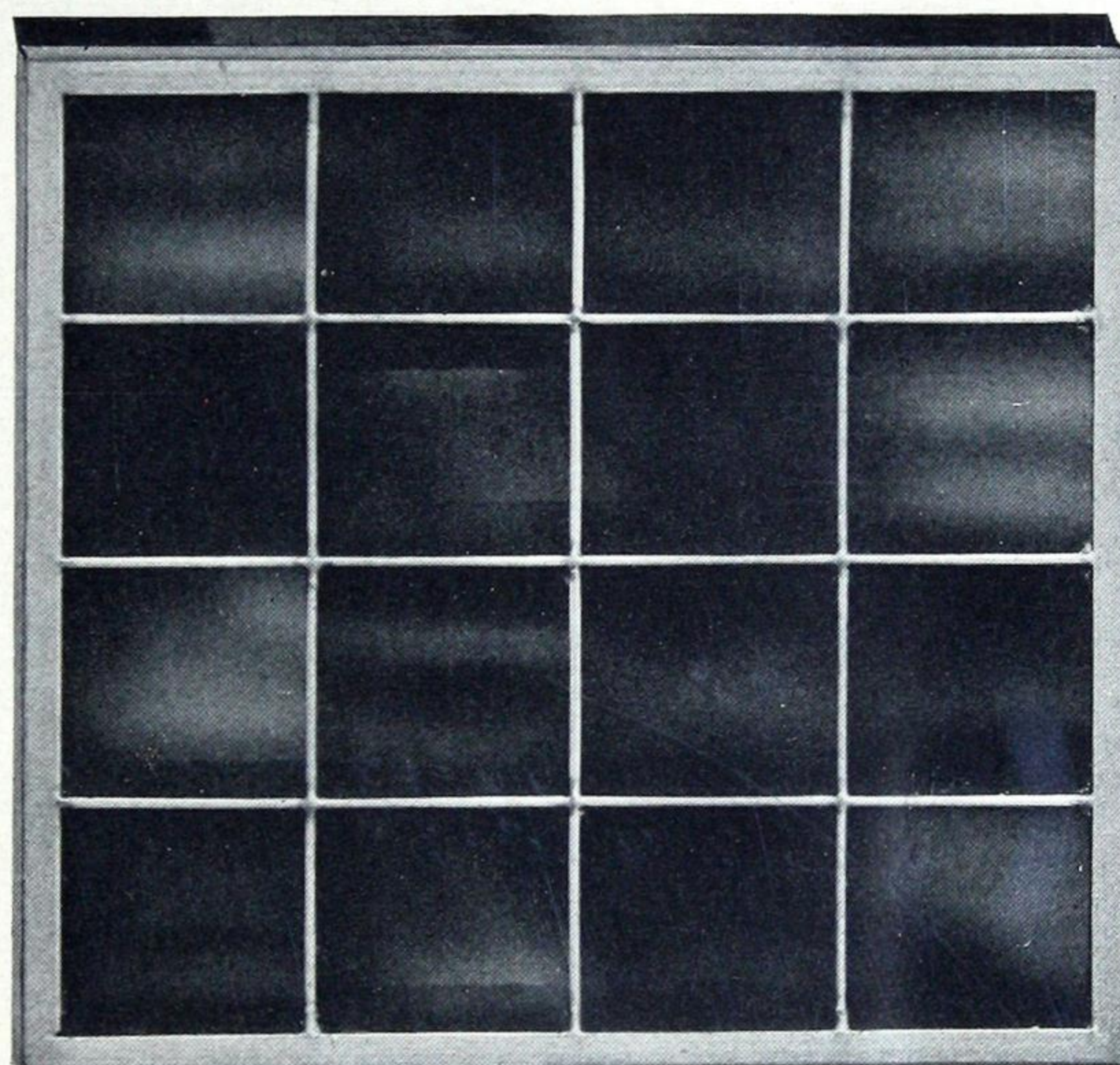
Glass Color Screens

HUB-O-LITE glass color screens for Type C Borders have been developed by our laboratory in our search for a suitable color medium to supplant the unreliable gelatine and high priced natural color lamps. Heretofore glass has not been practical for borderlight use, due to the unequal heating from the lamp, which sets up such an amount of internal stress that very often the glass breaks with almost explosive violence. On the other hand, the life of gelatine is so short under the heat of a large Type C Lamp, that it is undesirable. An attempt has been made to use natural color lamps but they have been unsatisfactory in most cases, due to their high light absorption, and their high cost.

Our glass color screens have eliminated these troubles. The screen is made up of small squares of glass, firmly and scientifically set in-

to place and held there by a special lattice work construction which allows for the expansion of the glass; and as the size of each piece is comparatively small, the heat is uniformly distributed, eliminating danger from breakage. The glass is especially thin, and of the finest and most uniform quality that we could find in the entire foreign market. The light absorption is scarcely any greater than that of gelatine. Before assembling, each piece of glass is rigidly inspected for quality, density and color.

One of these color screens was tested in our laboratory in one of our standard Type C borders, with a 500 watt lamp, and allowed to burn continuously for 48 hours. No sagging, cracking or deterioration of any kind was noticeable after the test. The first cost is the only cost, and our large production has made the price very low.



LIST PRICES

Cat. No. 60, glass color screens, 11½ inches by 10½ inches, for regular Type C Borders, \$3.85 each.

Cat. No. 61, glass color screens, 8¾ inches by 7¾ inches, for proscenium strips, \$3.50.

Cat. No. 62, glass color screens, 11½ inches by 10½ inches, for 300 to 500 watt box lights, \$3.85 each.

Cat. No. 63, glass color screens, 13 inches by 12 inches, for 1000-2000 watt box lights, \$4.00 each.

The following colors are carried in stock. Other colors on request: Frost White, Blue, Red, Green, Amber.

Be sure to specify color.

Price on special sizes on request.

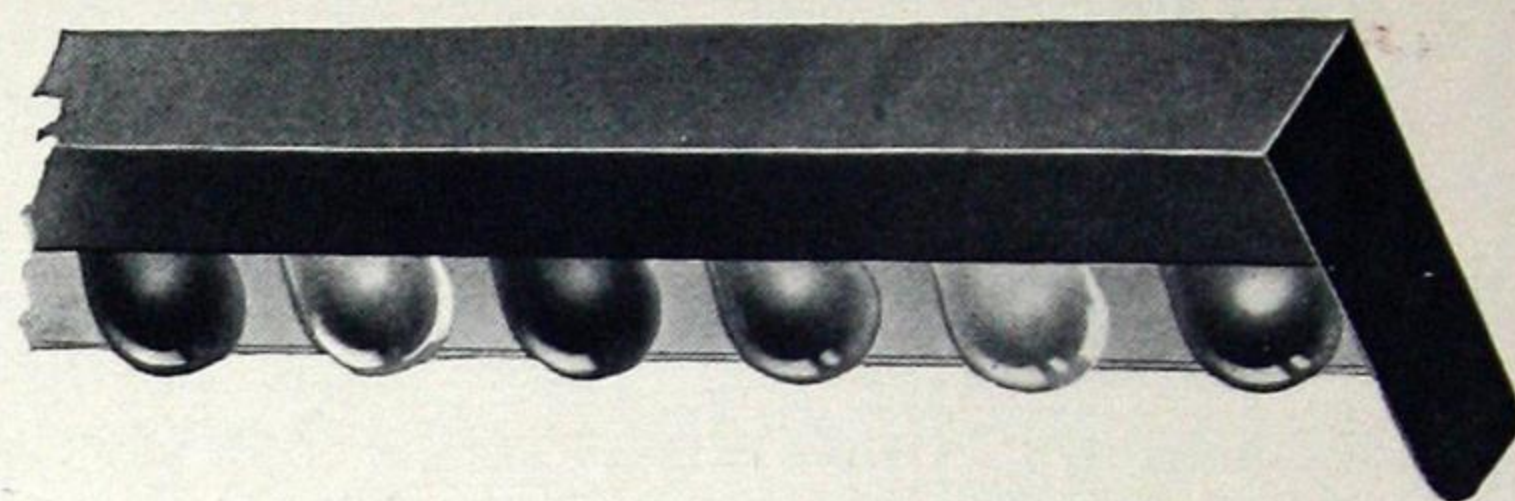
The Electrical Folks for Theatrical Folks

Type B Borderlights

FOR stage lighting in the smaller theatres, schools and lodge halls HUB-O-LITE type B borders, using Mazda lamps, have proven very satisfactory. The Mazda type B lamps can still be secured from our lamp department. They are rigidly constructed of No. 20 gauge heavy galvanized iron, painted with black heat-resisting enamel on the outside and on the inside with aluminum bronze.

It is properly designed to project the entire output of the lamps down upon the stage, and the effect compares favorably with that of any border of its type on the market. Its low price and simple construction are points in its favor.

The wiring box for the cable connections is placed in the center of the border, but can be placed at either end if specified.



LIST PRICES

Type B border, complete with medium base sockets, wired for circuits as per specifications, complete, including chain hangers and strain insulators, but no rigging, battens or lamps.

Cat. No. 100, sockets on 3-inch centers, for 4 colors, wired, per foot, \$7.10.

Cat. No. 101, sockets on 3-inch centers, for 4 colors, not wired, per foot, \$4.50.

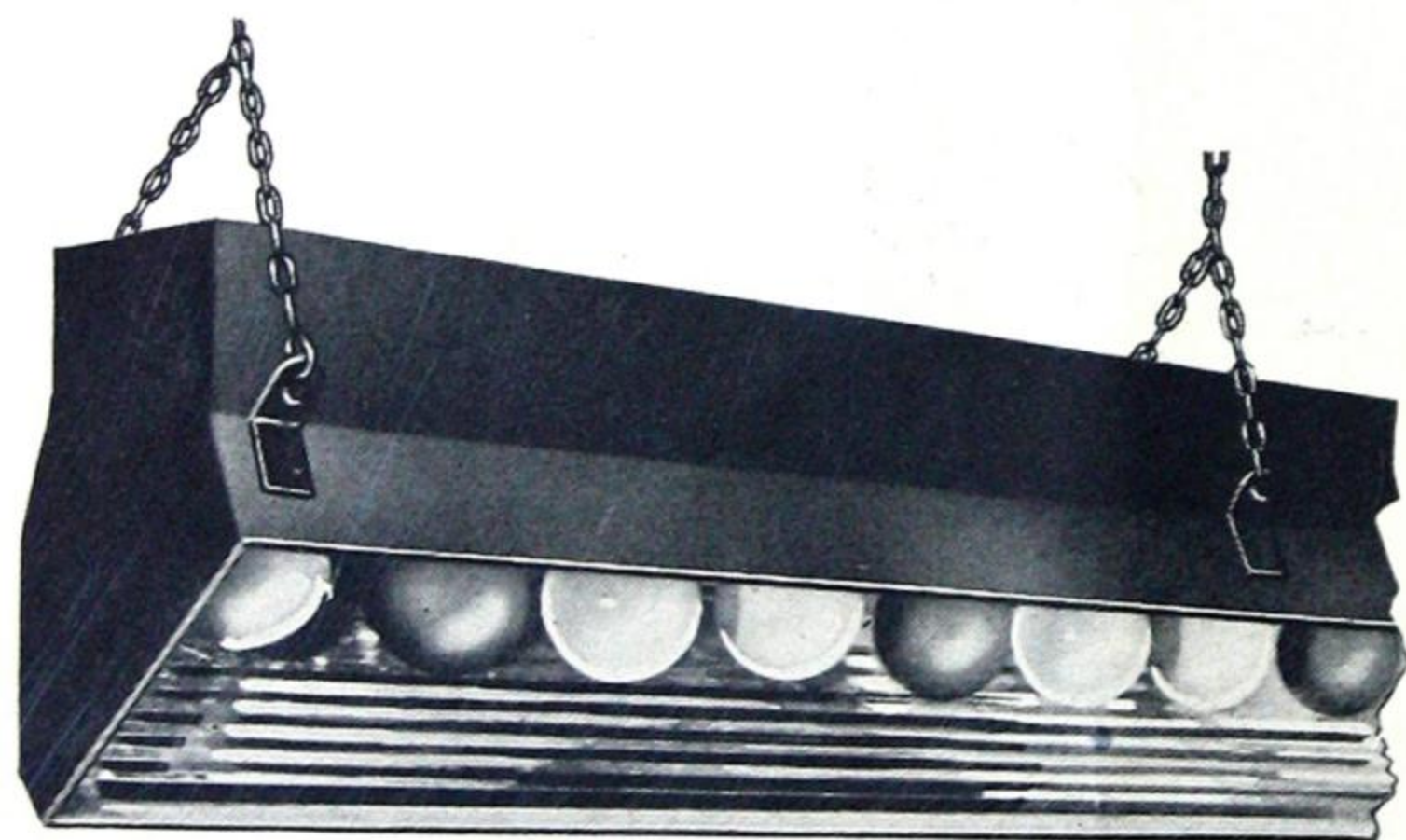
Cat. No. 102, sockets on 4-inch centers, for 3 colors, wired, per foot, \$6.00.

Cat. No. 103, sockets on 4-inch centers, for 3 colors, not wired, per foot, \$4.05.

Cat. No. 104, sockets on 6-inch centers, for 2 colors, wired, per foot, \$4.90.

Cat. No. 105, sockets on 6-inch centers, for 2 colors, not wired, per foot, \$3.60.

Type A Borderlights



SCHOOLS, theatres and lodge halls with stages that are not large enough to warrant the use of type C borders will find HUB-O-LITE type A border a highly efficient unit. They are designed especially for the new 60 watt inside frost lamp bulbs with the end on candle power.

The housing is constructed of No. 20 gauge galvanized iron. The outside is finished with deep green heat resisting enamel. The reflector

is of our brilliant mirror metal, so designed that all of the special candle power of the lamp is projected out to a useful plane. This new borderlight compares very favorable with the type C border in brilliancy of illumination. Its high efficiency makes it a highly desirable unit.

The wiring box for the cable connections is placed in the center but can be placed at either end if so specified.

LIST PRICES

Type A border, complete with medium base sockets, wired for circuits as specified, complete with chain hangers, strain insulators, and reflectors, but no lamps, battens or rigging.

Cat. No. 150, sockets on 3-inch centers, for 4 colors, wired, per foot, \$8.20.

Cat. No. 151, sockets on 3-inch centers, for 4 colors, not wired, per foot, \$5.20.

Cat. No. 152, sockets on 4-inch centers, for 3 colors, wired, per foot, \$7.15.

Cat. No. 153, sockets on 4-inch centers, for 3 colors, not wired, per foot, \$5.20.

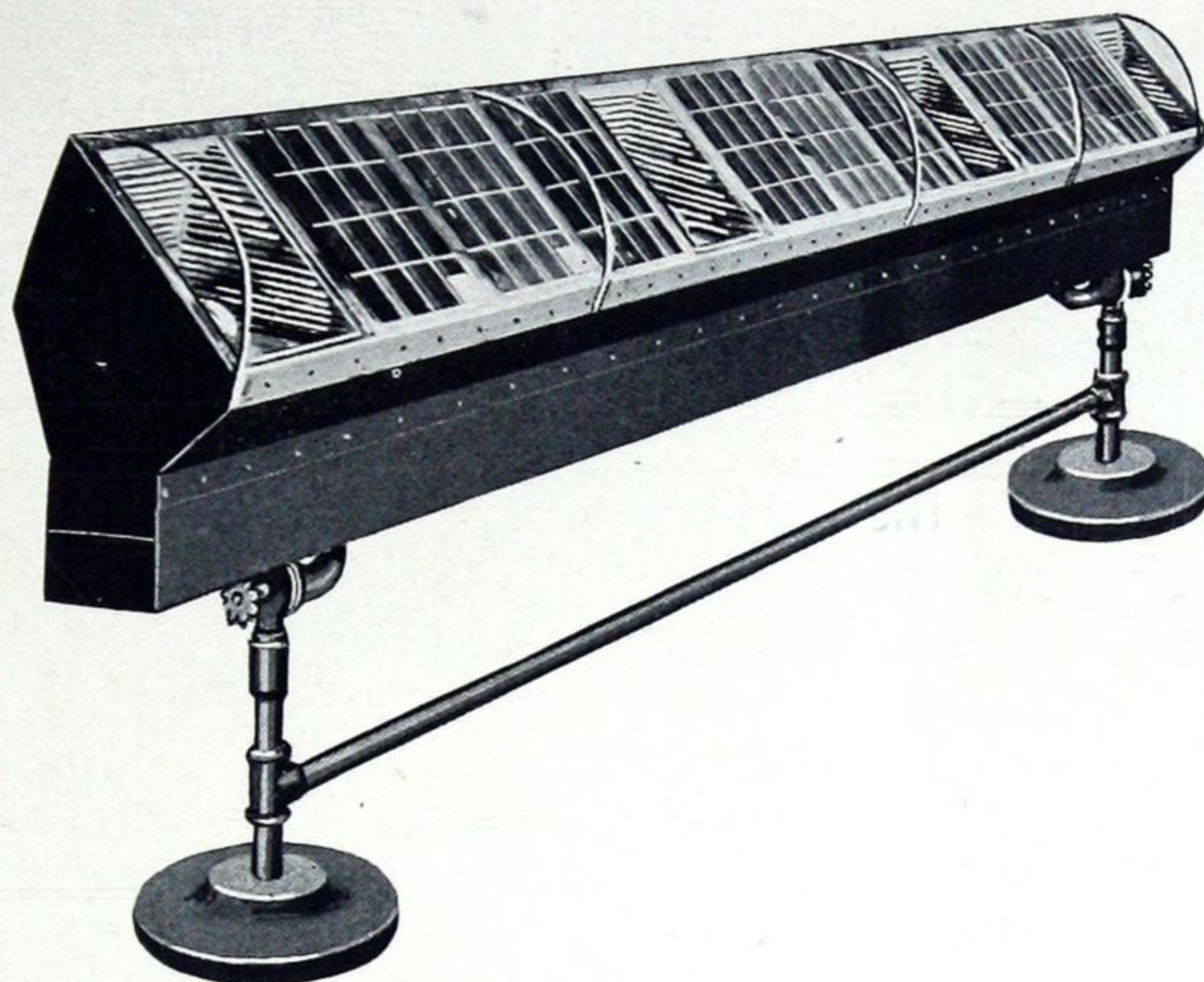
Cat. No. 154, sockets on 6-inch centers, for 2 colors, wired, per foot, \$6.05.

Cat. No. 155, sockets on 6-inch centers, for 2 colors, not wired, per foot, \$4.75.

Cyclorama Strips

HUB-O-LITE Portable Cyclorama Strips are identical in construction to our highly efficient type "C" borders. They can be furnished in any length desired and find their widest application in intense illumination, such as is required from below cyclorama drops. The lighting trough is readily detached from the standards, enabling the trough to be used for strip lighting when necessary.

The housing is made of No. 20 gauge galvanized

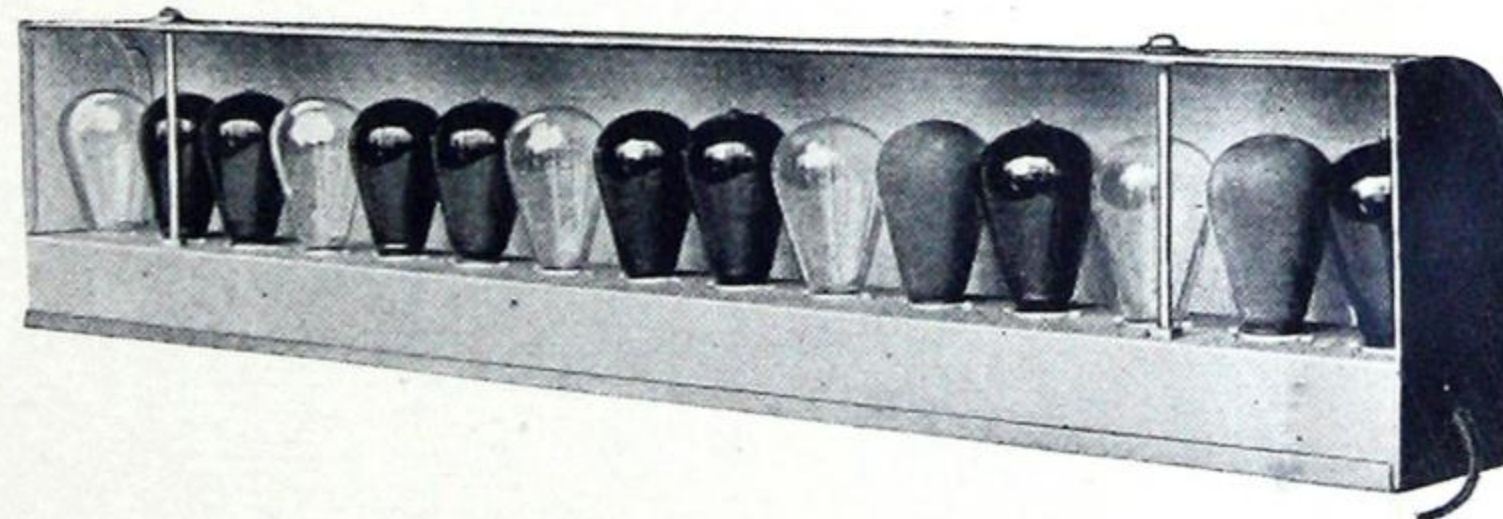


iron, finished with green heat resisting enamel on the outside. The reflectors, constructed of our mirror metal are arranged for 300 to 500 watt lamps mounted on 12" centers. Slides are provided for our standard glass color screens. The rugged pipe framework mounts on heavy cast iron bases fitted with heavy noiseless castors. It is provided with a telescopic stand for raising and lowering and an adjustable head for varying the angle of the light trough.

Cat. No. 250, Cyclorama Strips, complete, as detailed above, with standard 25 feet of portable stage cable but no stage plugs, lamps or color screens, wired for colors as specified, per foot, \$15.00.

Striplights

OUR HUB-O-LITE Striplight, which is very similar in design to our Type B border, has proven a very satisfactory unit in the work for which it has been created. It has been properly designed to throw the light exactly where desired. It is equipped with 25 ft. of portable stage cable, but without stage plugs, and with hooks for hanging on scenery.



ed with green heat resisting enamel and the reflecting surfaces finished with an aluminum bronze and equipped with our high intensity mirror metal reflector.

They are rigidly constructed of No. 20 gauge galvanized iron and especially designed for structural strength and low weight to facilitate handling. The outside is paint-

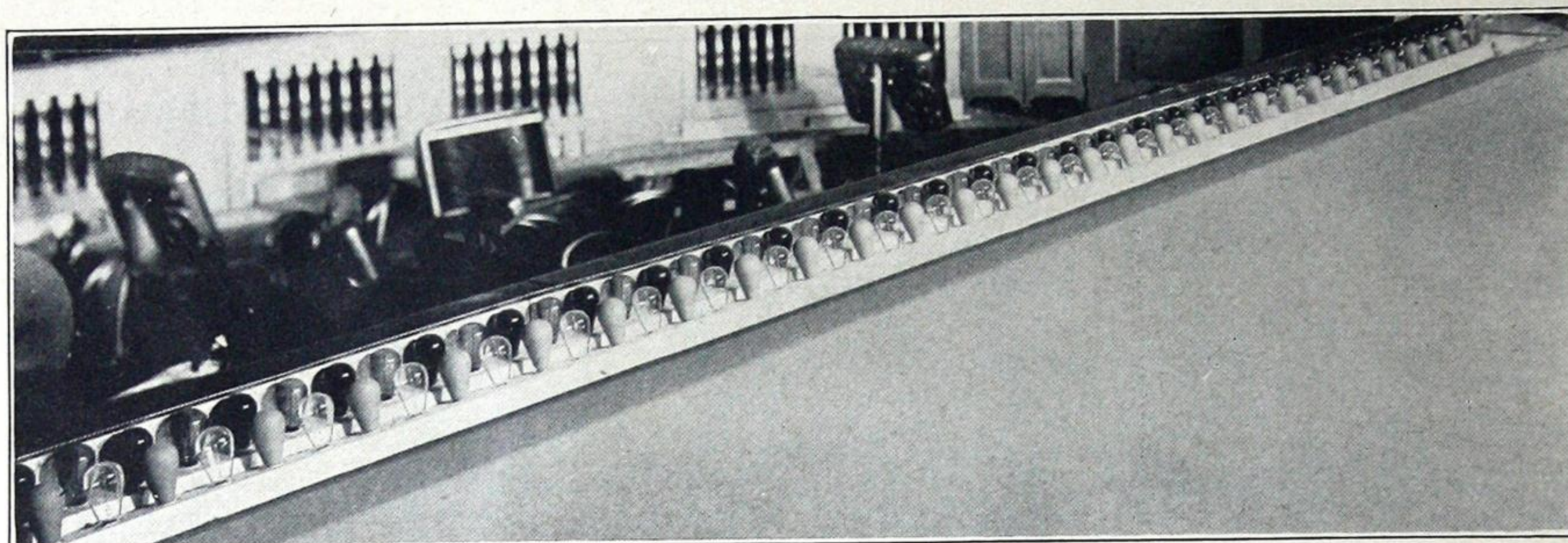
LIST PRICES

Type B Striplights, complete, with medium base sockets, wired for one color, complete, not including lamps.

Cat. No. 175, sockets on 4" centers with mirror metal reflectors, per foot, \$7.25.

Cat. No. 176, sockets on 3" center, wired, mirror metal reflectors, per foot, \$8.25.

Type B Footlights



HUB-O-LITE type B footlights, supplied in one and two row construction have been designed to give the greatest volume of light just where required; at the level of the stage floor. When used with our mirror reflector, they have been acclaimed by many satisfied users as a most satisfactory unit.

The housing of both types is rigidly built of No. 20 gauge galvanized iron, so designed that it can be lifted out of the trough for cleaning if connected to the wiring system with flexible conduit with sufficient slack. The outside is painted with black enamel; the inside with aluminum bronze.

The wiring is as specified for circuits and colors. In the

one row type, the sockets are placed in one row on centers as specified. The two row construction provides sockets in the rear row for colors and in the front row for white only, and a fourth color if desired. The prices given below are for the unit complete as specified. We do not furnish the lamps, apron, nosing, reflectors or lining for the gutter, and the price is for straight construction only. An additional price is charged for reflectors and for curved two row construction.

The present tendency of lamp manufacturers to discontinue the Type B Lamp need not deter anyone from using this type of equipment, for we will still be able to supply lamps for it.

LIST PRICES

Two row construction, Cat. No. 300, as specified above for two colors in rear row with sockets on 3-inch centers, and one color only in front row, with sockets on 6-inch centers, wired complete, per foot.....\$9.80

Two row construction, Cat. No. 301, same as above, not wired, per foot.....\$5.90

Two row construction, Cat. No. 302, sockets with 3-inch centers in both front and rear rows, wired complete for four colors, per foot.....\$11.90

Two row construction, Cat. No. 303, same as above, not wired, per foot.....\$6.70

One row construction, as specified above, but with sockets and wiring as follows:

Cat. No. 310, one row, four colors, 3-inch centers, wired, per foot.....\$5.35

Cat. No. 311, one row, four colors, 3-inch centers, not wired, per foot.....\$2.75

Cat. No. 312, one row, three colors, 4-inch centers, wired,

per foot.....\$4.25

Cat. No. 313, one row, three colors, 4-inch centers, not wired, per foot.....\$2.30

Cat. No. 314, one row, two colors, 6-inch centers, wired, per foot.....\$3.15

Cat. No. 315, one row, two colors, 6-inch centers, not wired, per foot.....\$1.85

Cat. No. 316, one row, one color, 12-inch centers, wired, per foot.....\$2.05

Cat. No. 317, one row, one color, 12-inch centers, not wired, per foot.....\$1.40

If receptacles are desired for pin spots, add per receptacle,.....\$4.00

If curved construction is desired on two step footlight, add per foot.....\$3.00

If reflectors are desired, add per foot.....\$1.80

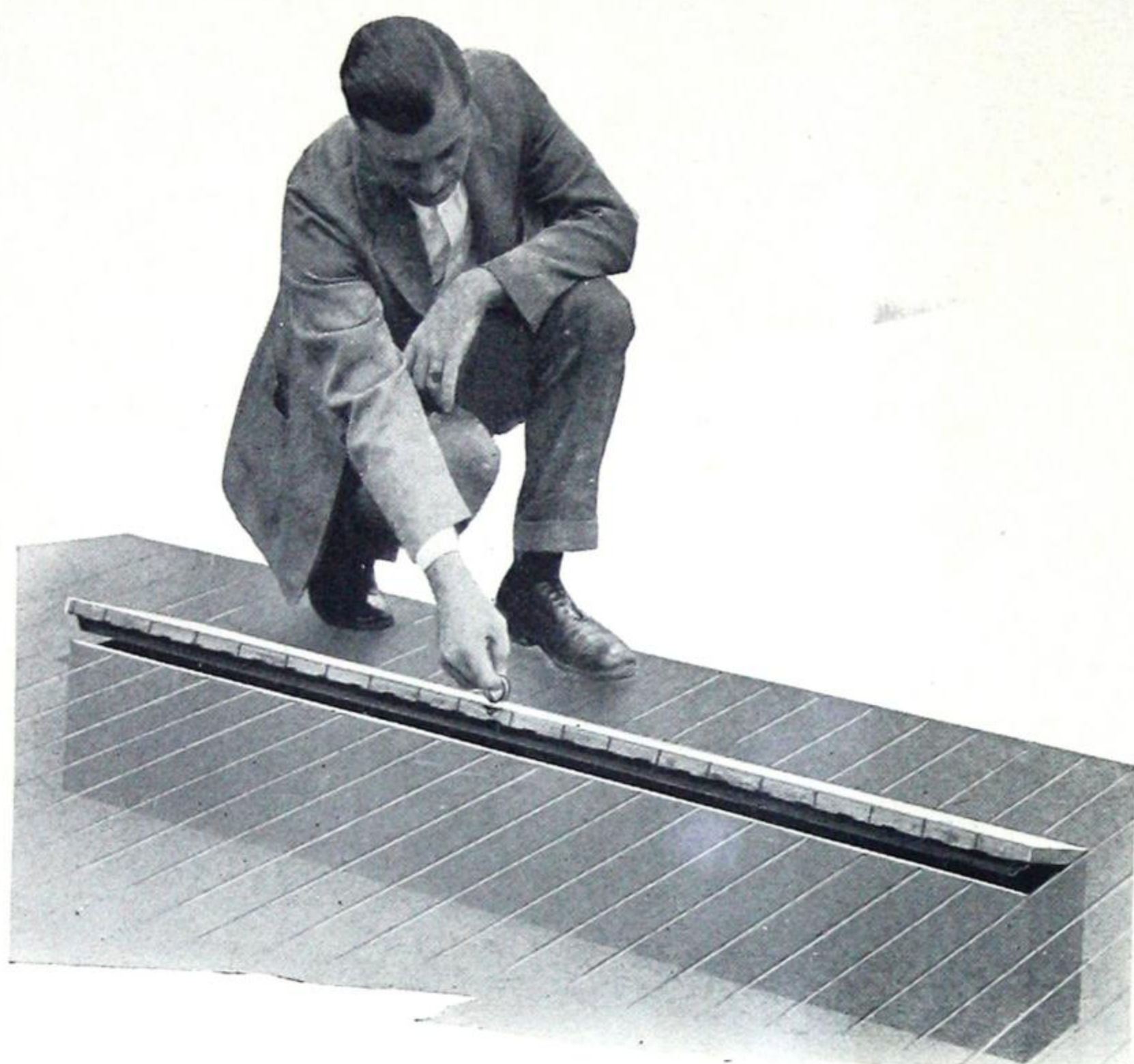
HUB-O-LITE

VANISHING FOOTLIGHTS

Simple and positive in its operation

Only Two Operations

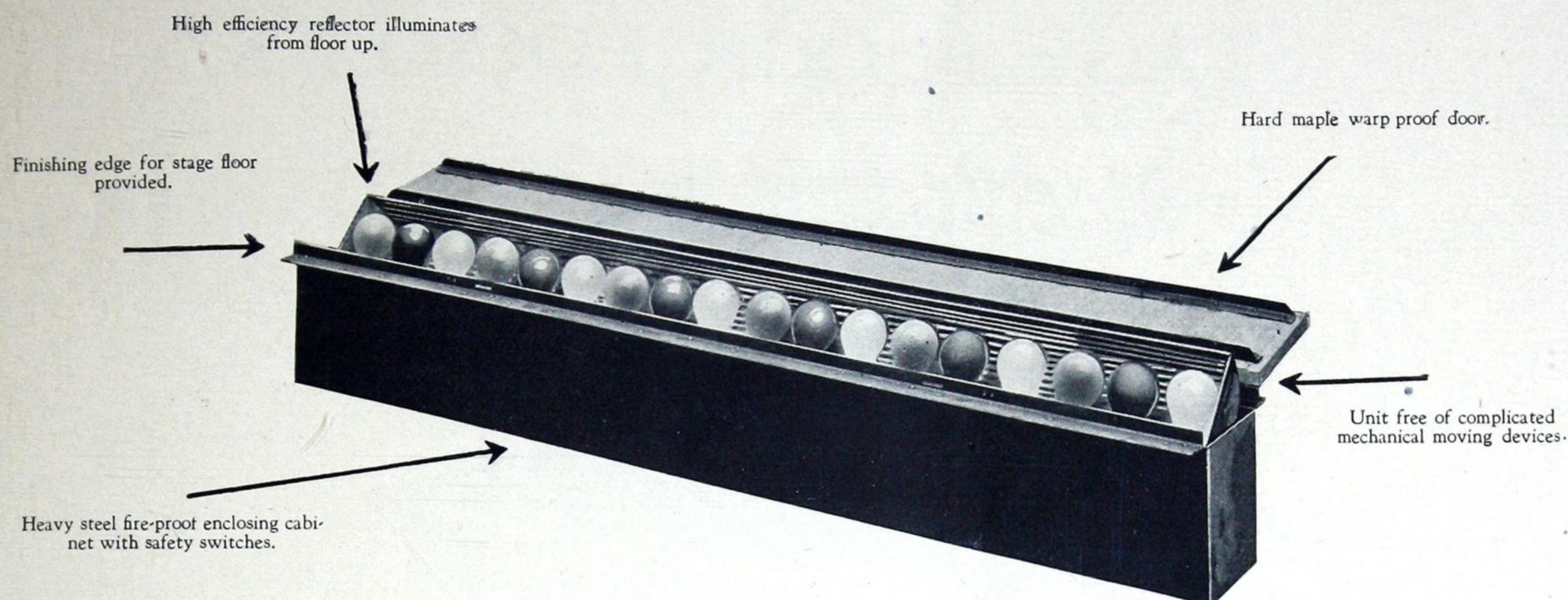
A second to turn two flush latching devices—the finger engages the flush lifting ring, and then —



when the door is opened the lights are raised with a slight backward tilt and the unit is ready for use.



The Electrical Folks for Theatrical Folks



HUB-O-LITE Vanishing all-metal footlights are designed especially for theatres, halls, schools, auditoriums, churches and other buildings where footlights must be removed when not in use. They are the simplest and the most economical ever designed for this use. They are furnished complete in five foot sections, ready to install in the recess provided for them in rough flooring, and so designed that the finish flooring can be laid up to them without special mortising.

The housing is rigidly constructed of No. 20 gauge galvanized sheet metal, finished in green, heat-resisting enamel. The light trough is finished inside with aluminum bronze paint and outside with the same finish as the housing. It is so arranged that it can readily be lifted out of the housing for cleaning without disturbing the connections.

A feature of this unit is the ease with which it is operated. The light trough is raised up to

the top and with a slight backward tilt, lifts into place. A safety feature against fire is provided in case the trap doors are closed with the lamps left burning. Automatic cutout switches automatically open the circuits and prevent the lamps from burning when down beneath the floor and the cover closed. Unless otherwise specified, the light trough will be wired for three colors, six lights per color, using 60 watt type B lamps.

The reflector is constructed of our mirror metal, run continuously from end to end of each section. It is so designed that the light from each individual lamp is correctly projected upon the stage with the light center well above the stage floor, giving proper illumination along the floor line.

The prices given below are for the unit complete as specified, without lamps. For shorter or longer lengths, or for equipment built to meet special conditions, special prices will be quoted.

LIST PRICES

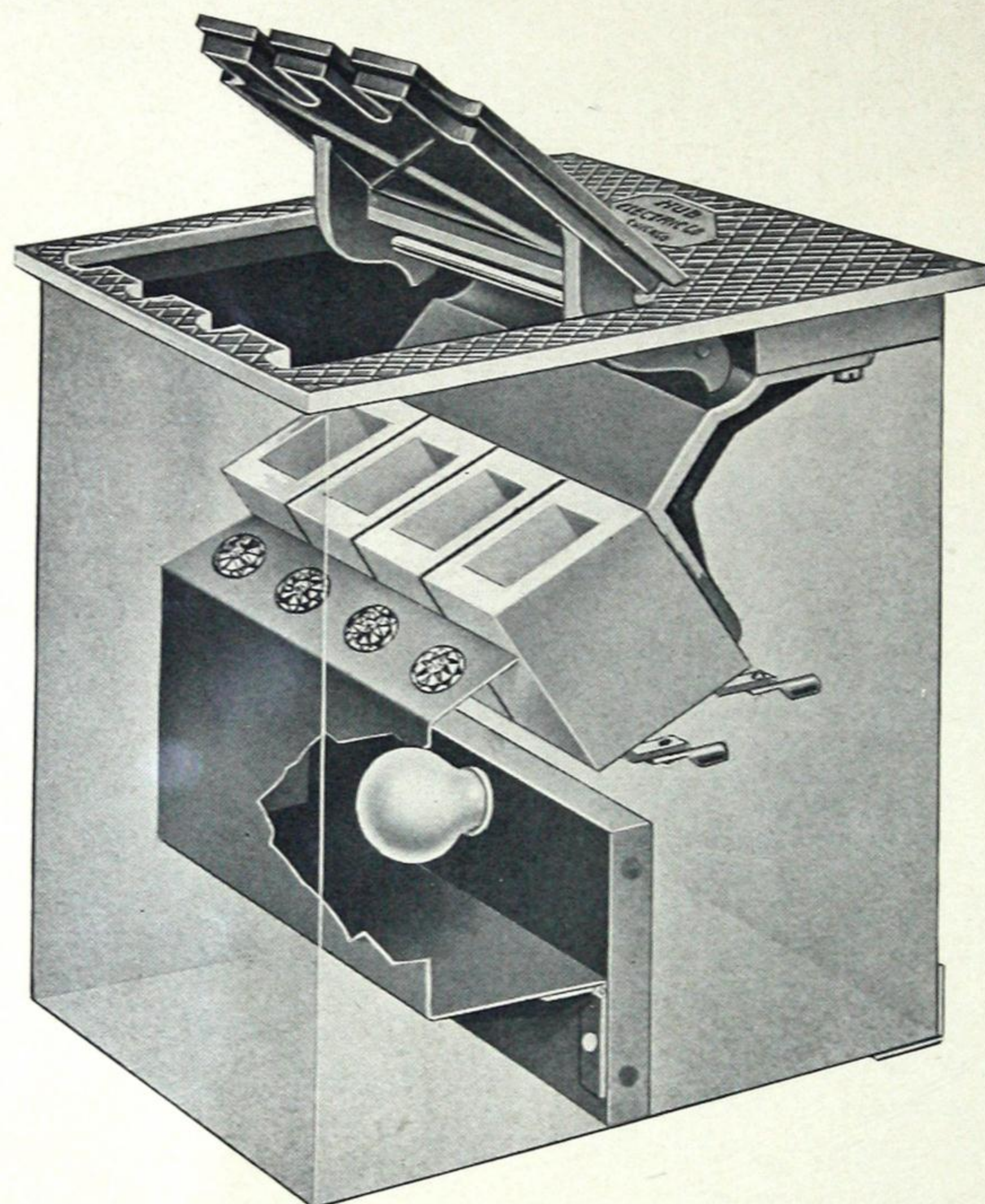
Vanishing footlights in five foot sections wired for three colors with medium base sockets, complete with trap doors, but without lamps.

Cat. No. 320, Vanishing footlights, three colors, wired \$75.00.

Cat. No. 321, Vanishing footlights, three colors, not wired \$63.00.

STAGE FLOOR POCKETS

*An unusual design made especially
for the convenience of the operator*



HUB-O-LITE stage pockets are constructed of heavy gauge sheet iron, finished with several coats of black japan, and are provided with many unusual refinements and features that make it a par excellent unit. It is provided with a pilot light that automatically burns when the cover is open and remains burning until the cover is closed. In addition to the regular designation discs showing the colors of each receptacle, each one is provided with a colored jewel which glows whenever the door is open, giving a positive colored light indication to the operator placing the plugs. The face plate doors are of heavy iron,

ribbed and reinforced, and finished on the surface with a heavy cast thread. The flexible stage cables are brought through notches in the hinged self-closing door which is so designed that it cannot open when pressure is brought down heavily on the hinge.

The wiring is entirely concealed by a partition. To facilitate cleaning, the box has a trap door opening into the space under the stage. The pocket is provided with 50 ampere plugs and receptacles and is made in three sizes, two gang, four gang, and six gang, providing pockets for incandescent and arc lamps.

The Electrical Folks for Theatrical Folks

HUB SIZES OF HUB-O-LITE STAGE POCKET

Gang	Width	Depth	Length
2	$10\frac{7}{16}$	$13\frac{3}{8}$	$4\frac{11}{16}$
3	$10\frac{7}{16}$	$13\frac{3}{8}$	$9\frac{1}{16}$
4	$10\frac{7}{16}$	$13\frac{3}{8}$	$9\frac{1}{16}$
5	$10\frac{7}{16}$	$13\frac{3}{8}$	$13\frac{7}{16}$
6	$10\frac{7}{16}$	$13\frac{3}{8}$	$13\frac{7}{16}$

LIST PRICES

HUB-O-LITE, Catalogue No. 501, two-gang stage pocket, complete with plugs, \$20.00.

HUB-O-LITE, Catalogue No. 502, three-gang stage pocket, complete with plugs, \$30.00

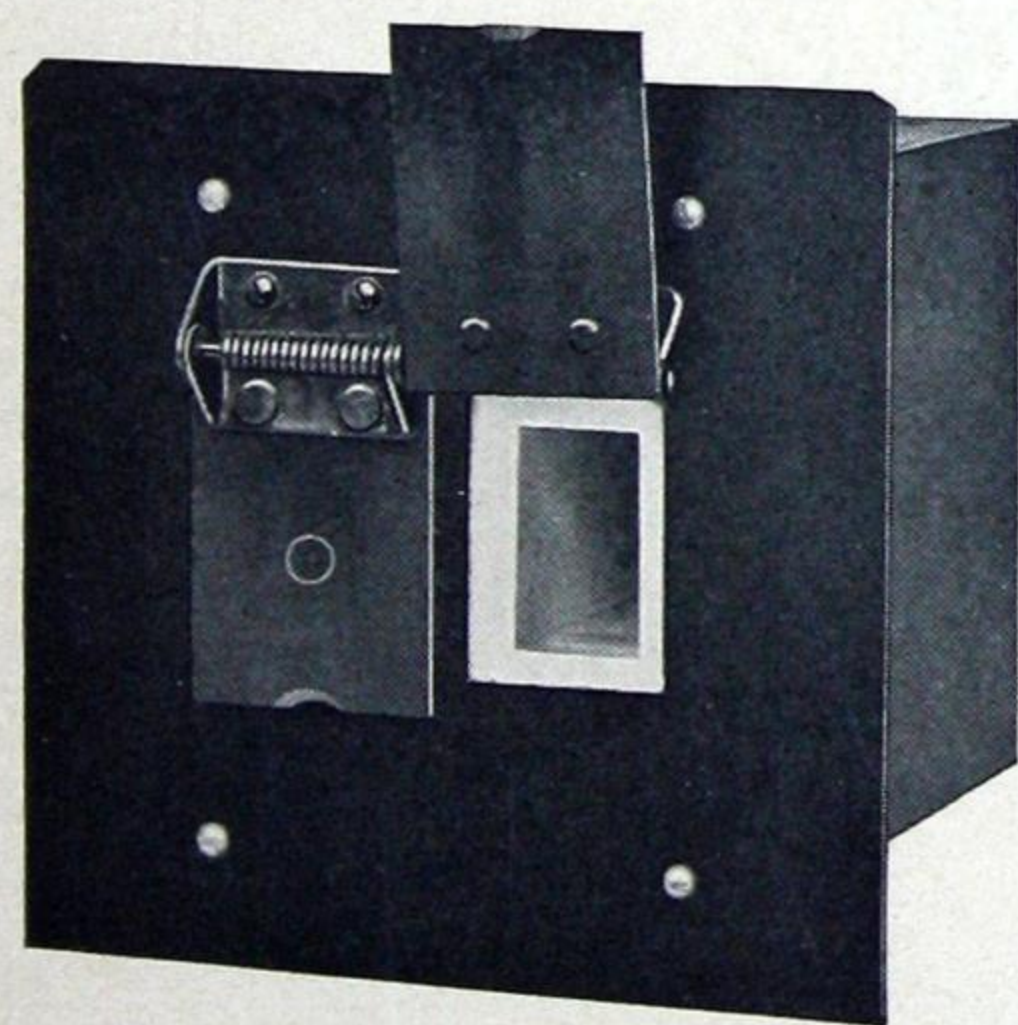
HUB-O-LITE, Catalogue No. 503, four-gang stage pocket, complete with plugs, \$40.00

HUB-O-LITE, Catalogue No. 504, five-gang stage pocket, complete with plugs, \$50.00.

HUB-O-LITE, Catalogue No. 506, six-gang stage pocket, complete with plugs, \$60.00.

NOTE: Be sure to specify rights or lefts.

Plugging Boxes



HUB-O-LITE plugging boxes consist of rugged steel cabinets equipped with 50 ampere capacity porcelain plug receptacles and plugs with copper current carrying parts. Arranged to be set in the wall with a cover plate equipped with hinged type self-closing doors.

They are regularly furnished in 1 to 5 gang.

LIST PRICES

Cat. No. 510, 1 gang flush type plugging box \$8.00.

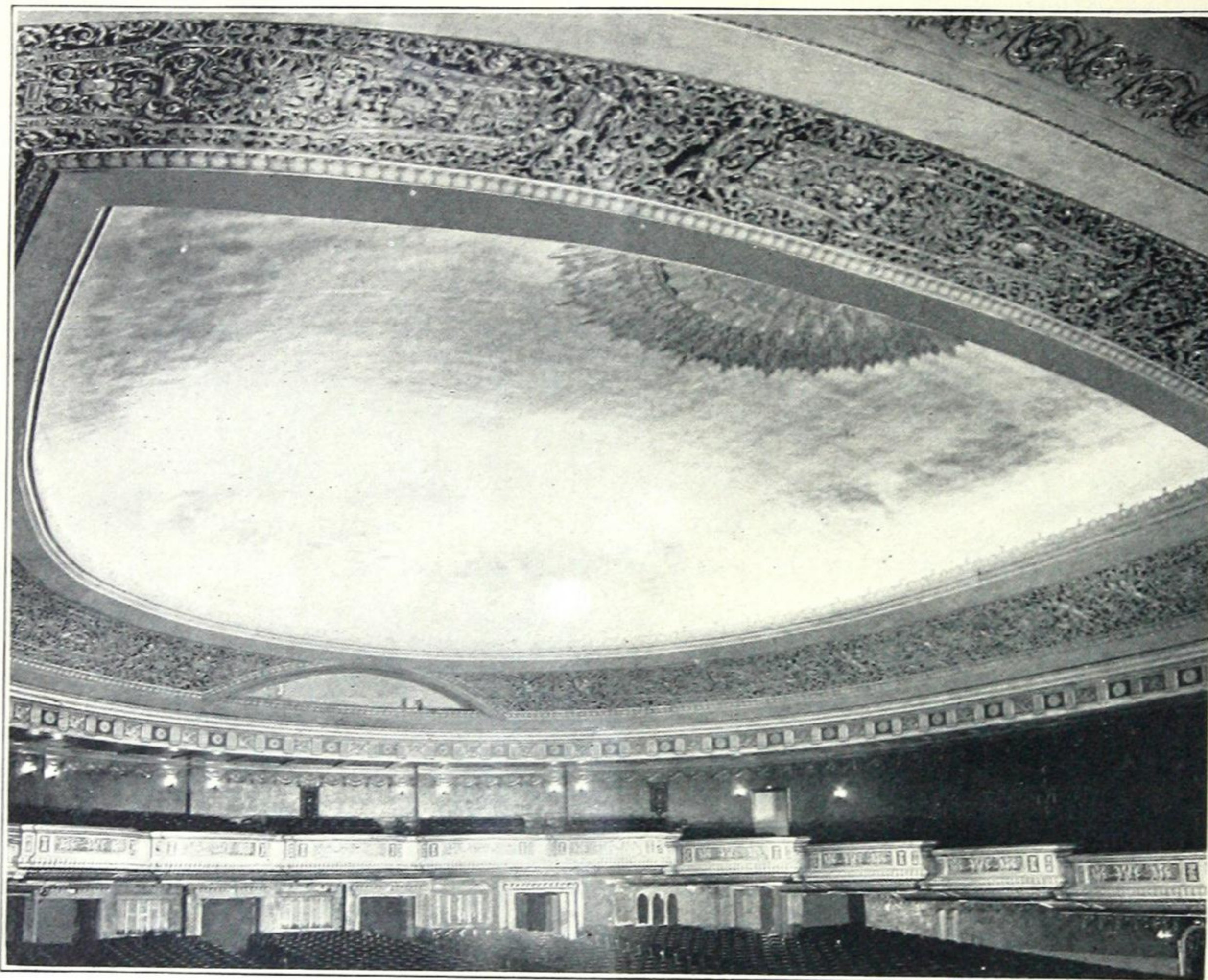
Cat. No. 511, 2 gang flush type plugging box \$16.00.

Cat. No. 512, 3 gang flush type plugging box \$24.00.

Cat. No. 513, 4 gang flush type plugging box \$32.00.

Cat. No. 514, 5 gang flush type plugging box \$40.00.

Cove Troughing and Strip Lighting



An unretouched photo showing the results obtained with HUB-O-LITE cove troughing with mirror metal reflectors used in lighting a large theatre dome. Note the even illumination.

HUB-O-LITE troughing, equipped with adjustable, removable mirror metal reflectors has been developed to answer the long felt need for a cove illuminant that would light the recess or dome in which it was installed in such a way that the several defects in lighting of this kind would be eliminated, and maintenance costs brought down as well. Many units used for this

purpose are particularly unsatisfactory, due in part to the scalloping and slashing of light along the edges of the recess with objectionable dark spots between lights, and in part to the tarnishing of the reflector and difficulty of cleaning them.

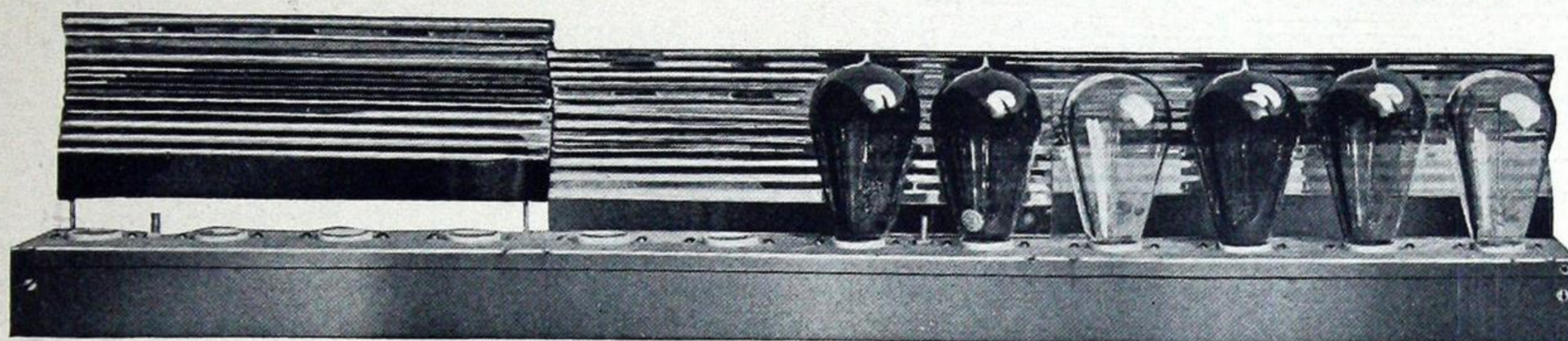
Our new reflector construction employs a continuous reflector so designed that the light rays

The Electrical Folks for Theatrical Folks

are thrown in all directions with great power, with the result that even the largest recesses are evenly and smoothly illuminated throughout. It is constructed of our high intensity new mirror metal and furnished in convenient lengths that are easily attached and removed with the trough-

coefficient of reflection indefinitely and requires only an occasional whipping.

The troughing is furnished with and without reflectors. The wiring pocket is made of No. 20 gauge galvanized iron finished in aluminum bronze, and so designed that the wiring is easily



Note the ease with which the reflectors can be removed

ing in place. With this construction it is not necessary to remove the lamps to clean them or the reflectors, and a great economy naturally results in the cost of replacing lamps damaged by handling. Cleaning is greatly facilitated. The mirror metal reflector will retain its high initial

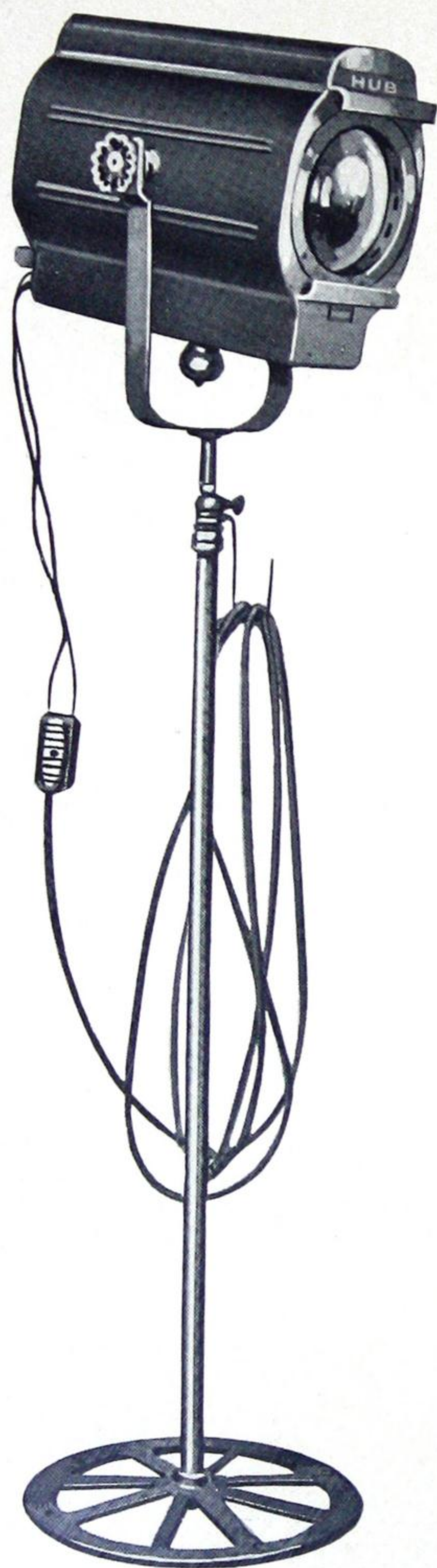
accessible. It is three inches wide and two inches high. The reflector measures four and one-half inches from top to bottom when placed on the troughing. When ordering state the size of lamp to be used and whether reflectors are desired or not.

LIST PRICES

Cove troughing complete, as specified, with reflectors but not including bulbs.
 Cat. No. 1500, sockets on 3-inch centers, wired for 4 colors, per foot, \$7.10.
 Cat. No. 1501, sockets on 3-inch centers, 4 colors, not wired, per foot, \$4.50.
 Cat. No. 1502, sockets on 4-inch centers, wired for 3 colors, per foot, \$6.00.
 Cat. No. 1503, sockets on 4-inch centers, 3 colors, not wired, per foot, \$4.05.
 Cat. No. 1504, sockets on 6-inch centers, wired for 2 colors, per foot, \$4.90.
 Cat. No. 1505, sockets on 6-inch centers, 2 colors, not wired, per foot, \$3.60.
 Cat. No. 1506, sockets on 12-inch centers, wired for 1 color, per foot, \$3.80.
 Cat. No. 1507, sockets on 12-inch centers, 1 color, not wired, \$3.15.

If mirror metal reflector is not desired, deduct \$1.75 per foot.

Spotlights



THE HUB-O-LITE spotlight is one that HUB engineers have developed especially to fulfill, in its truest sense, the exacting and rigid requirements of the supertheatre of today. Special attention has been given to its efficiency and performance in operation, and it has been thoroughly tested and approved and brought up to the exacting standards of HUB products. It is distinctly in a class by itself, and is not to be compared with spotlights of the same price made by other manufacturers.

The housing is soundly and rigidly constructed with heavy cast aluminum end pieces and heavy Russian iron sides, beautifully finished on the outside and a special finish on the inside to utilize as much as possible of the light emitted from the lamp. The entire housing is lined, with an air space between the outside walls and lining, and the entire assembly properly ventilated to provide a constant circulation of air. This insures the maximum life of the lamp and provides a ventilated lamp house that is cool enough to handle at all times. A high grade lens that will not discolor is held in place with a special ventilated guard to keep it cool. Provision is made for 1000 watt, 1500 watt or 2000 watt lamps, and a simple focusing device makes the unit easy to handle.

It is regularly furnished with telescopic pipe stand support, with a heavy cast iron base and an adjustable head. The lamp is wired with three feet of asbestos cable, a 15 ampere slip connector, and 25 feet of flexible stage cable. Two metal color frames are provided, but stage plug and lamps are not included.

LIST PRICES

HUB-O-LITE standard spotlight, complete with adjustable stand, two metal color frames, and 25 feet of flexible stage cable, without bulbs, Cat. No. 900, \$50.00.

HUB-O-LITE standard spotlight, same as above but without stand, Cat. No. 901, \$40.00.

HUB-O-LITE standard spotlight, same as above, but with pipe clamp support, Cat. No. 902, \$44.00.

HUB-O-LITE spill shield for spotlamps, Cat. No. 910, \$6.00.

HUB-O-LITE metal color frame, round opening, No. 911, \$0.50.

HUB-O-LITE metal color frame, rectangular opening, Cat. No. 912, \$0.50.

Olivettes

HUB-O-LITE olivettes have been designed to give the same efficient performance that is characteristic of all HUB products, tested and tried for design, and given the stamp of approval of illuminating engineers everywhere. Especial attention is called to the fact that this is not one of the "tin pan" variety, but represents an advance in the design of olivettes in which every effort has been made to produce a unit that not only affords protection to the high priced bulb, but utilizes all the light delivered from it, with a minimum amount of loss, and projects it over a wide area.

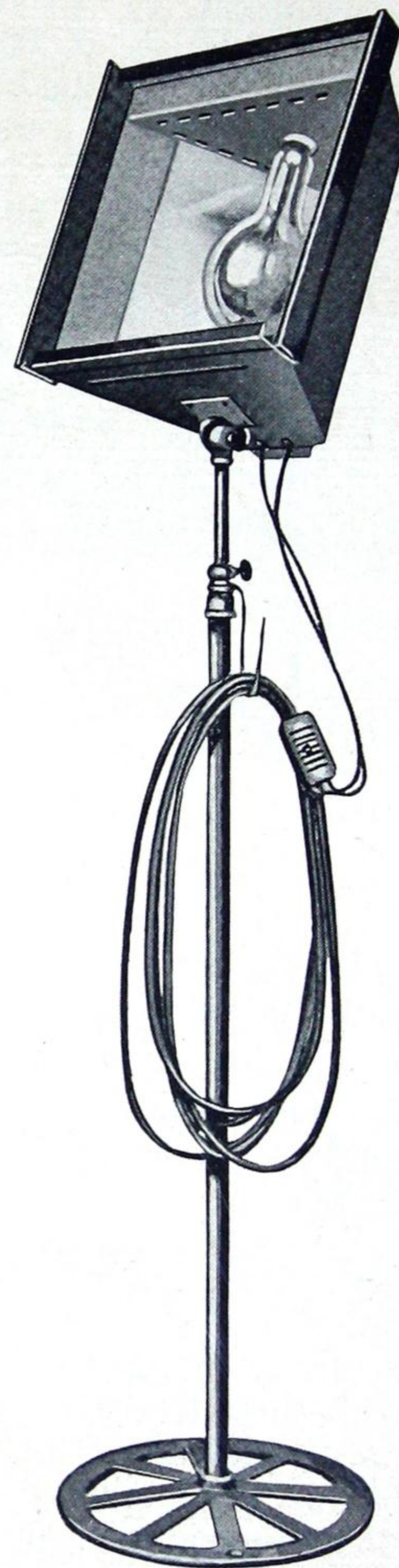
The housing is soundly and rigidly constructed, finished on the outside with black, heat-resisting enamel, and on the non-reflecting surfaces on the inside with aluminum bronze. Ample ventilating space is provided to keep the bulb temperature well within its working limits and protect the color screens from becoming overheated. The reflector, made of our mirror metal, is easily cleaned and not affected by the intense heat of the gas-filled bulb. They are wired with heavy asbestos cord and equipped with 25 feet of flexible stage cable. A Mogul base socket is used for 1000, 1500 or 2000 watt lamps.

These olivettes are furnished complete with adjustable stand with an 18-inch floor base, large size wire cable hook, 25 feet of stage cable, one slip connector and a wooden color frame. Bulbs not included. They can be furnished with angle pipe clamp, if desired.

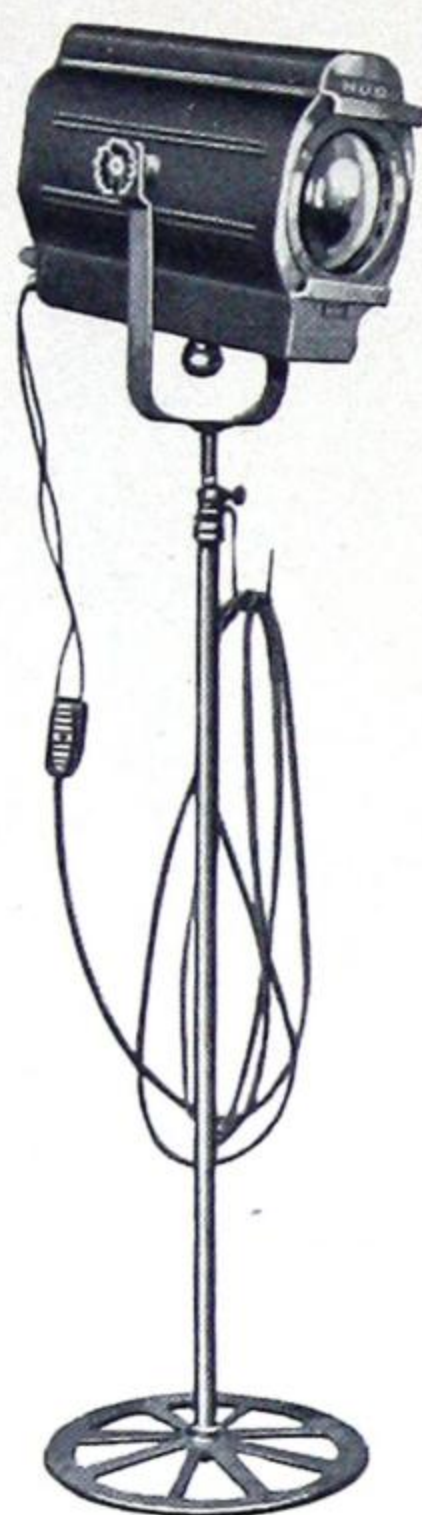
LIST PRICES

HUB-O-LITE olivette, complete with adjustable stand, one wooden color frame, and 25 feet of flexible stage cable, without bulbs, Cat. No. 800, \$40.00.

HUB-O-LITE olivette, complete same as above with pipe clamp support, Cat. No. 802, \$35.00.



Baby Spotlights



THE HUB-O-LITE baby spotlights are equal in every way to the standard spotlights described on the preceding page, but are intended for working at short range. Their small size adapts them for use in places where they must be concealed in a very small space, or hung from battens in banks as bridge spots for effect lighting.

They are equipped with a 4½-inch lens and designed for use with a 250 to 400 watt G-30 lamp. The light is controlled by a simple focusing device. We regularly furnish them with a telescopic pipe stand or a pipe clamp support for attaching to a pipe batten as specified. Lamp bulbs not included.

LIST PRICES

HUB-O-LITE baby spot, Cat. No. 920, complete with telescopic stand, two color frames and 25 ft. of stage cable, \$30.00.

HUB-O-LITE baby spot, Cat. No. 921, same as above, lamp house only, \$25.00.

HUB-O-LITE baby spot, Cat. No. 922, same as above, but with pipe clamp support, \$29.00.

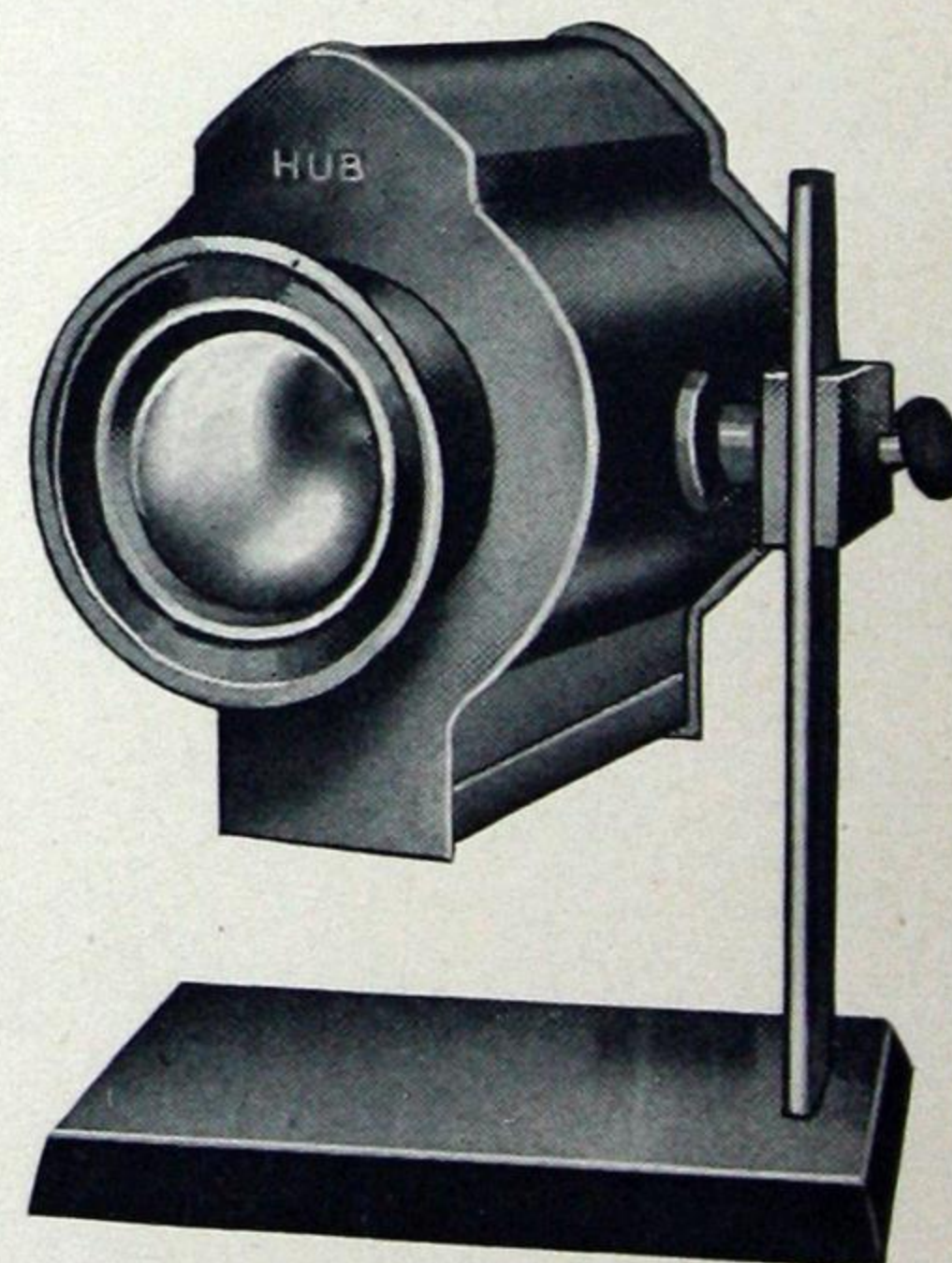
HUB-O-LITE single color frame, Cat. No. 915, circular opening, \$0.35.

HUB-O-LITE single color frame, Cat. No. 916, rectangular opening, \$0.35.

Pin Spots

OUR baby pin spot is of the same sturdy construction as our spotlight described on a preceding page. The size of the lamp house has been reduced without sacrificing its efficiency or workability. It is highly desirable for illuminating novelties, solos and specialties. It can easily be concealed, and has met with great popularity.

It is regularly furnished with a heavy base and can stand in any position. The housing is constructed of Russian iron with aluminum ends, and is equipped for a 250-400 watt type C spotlight bulb. A simple device is arranged for adjusting and focusing. Each unit is equipped with three feet moving picture machine heavy asbestos cable and 15 ampere slip connector with clamp for asbestos cord and 25 feet extra flexible stage cable. The stage plug is not supplied. Arranged for mounting color lens if desired.



LIST PRICES

Cat. No. 930, baby pin spot, complete as described above, with heavy base, \$15.00.

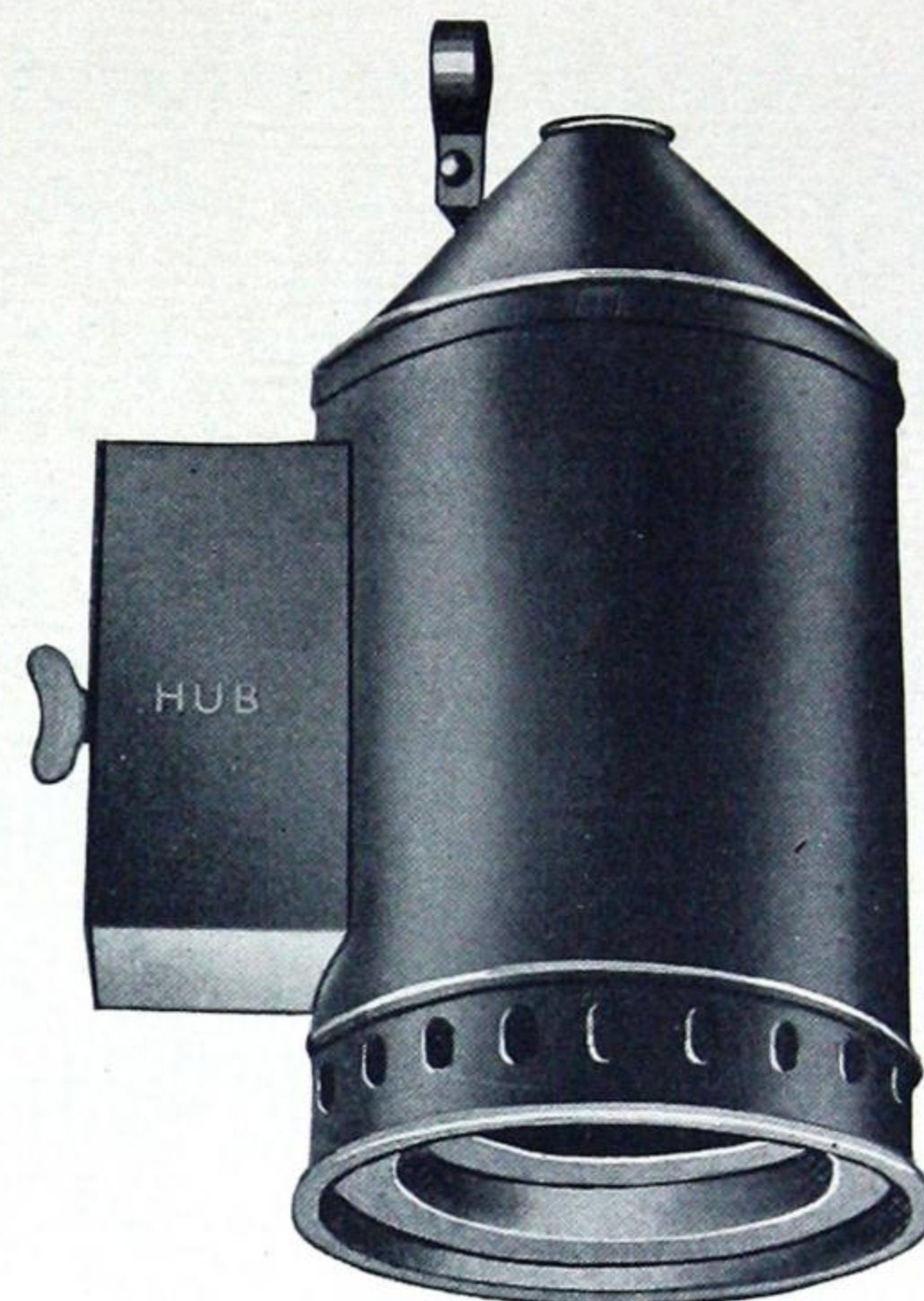
Cat. No. 931, baby pin spot, complete as described above, lamp house only, \$12.00.

Cat. No. 932, color lense attachment, including glass color lens, \$2.00.

The Electrical Folks for Theatrical Folks

Suspension Spotlights

OUR spotlights of the suspension type are designed primarily for overhead lighting with the units hanging from a pipe batten. They are particularly efficient for overhead spot lighting. The housing is constructed of aluminum and Russian iron. Its contour is barrel shaped to take minimum space when concealed overhead between hangings. They are equipped with a Mogul socket for 500 or 1000 watt Type G-40 lamps and are furnished with a simple focusing device for control. Guides are provided in the front casting for color slides.



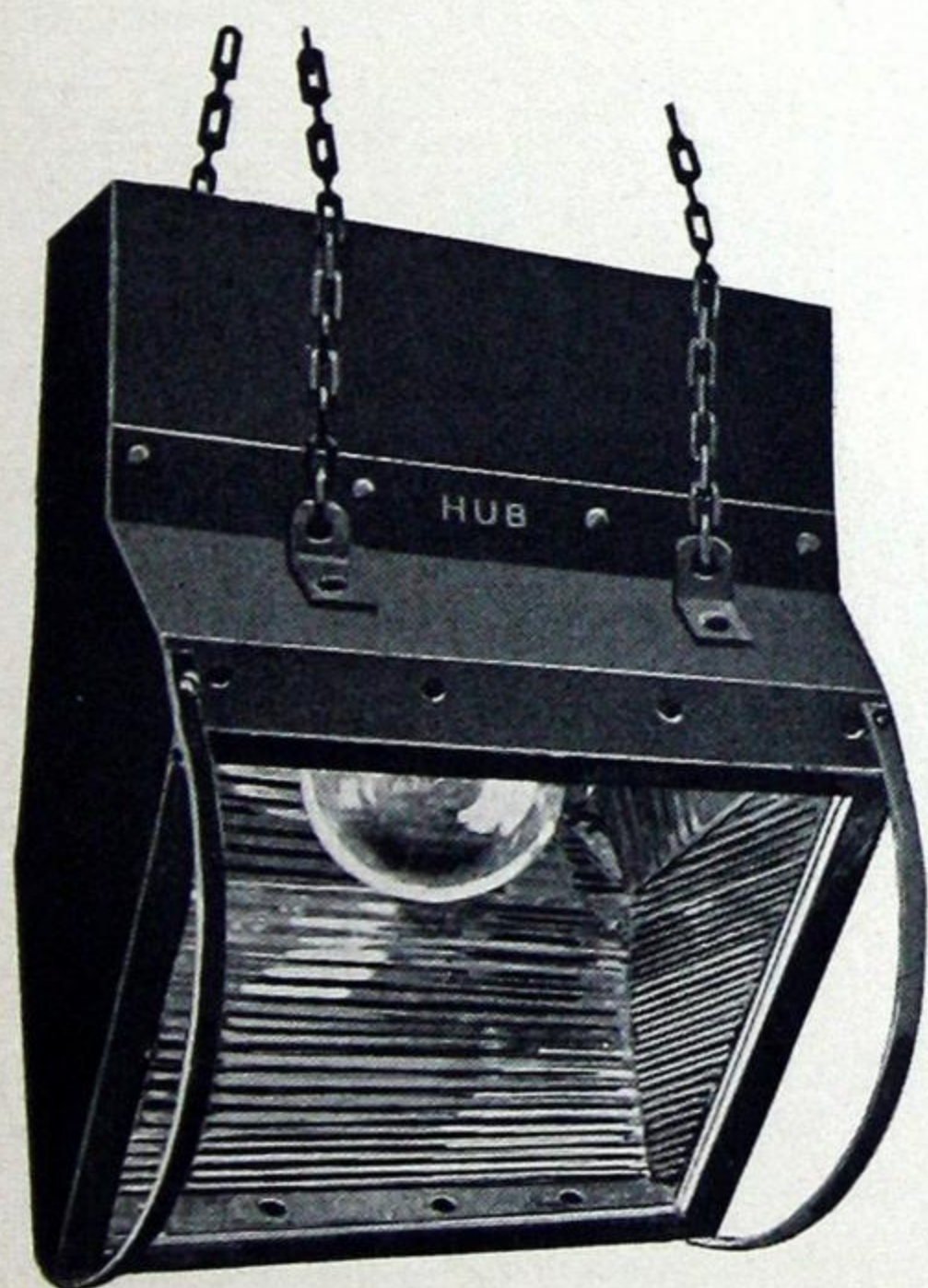
LIST PRICES

Cat. No. 940, hanging spotlight, 500 watt lamp, complete as described above, \$25.00.
 Cat. No. 941, color frame for above 500 watt lamp, \$0.35.
 Cat. No. 942, hanging spotlight, 1000 watt lamp, complete as described above, \$32.50.
 Cat. No. 943, color frame for above 1000 watt lamp, \$0.35.
 Lamps not included.

Box Lights

OUR box lights have been developed in response to a need for a real unit for overhead flood lighting in large theatrical productions requiring a tremendous volume of light, with considerably greater flexibility of control than the regular borderlight offers.

In construction they are identical with our type C compartment borderlights. They are furnished in two sizes, for 300 to 500 and 1000 to 2000 watt lamps. Also furnished in units of three in one housing. Many users have found these three light units, wired for three colors, very economical and efficient as borderlights. Prices on three-compartment units furnished on request.



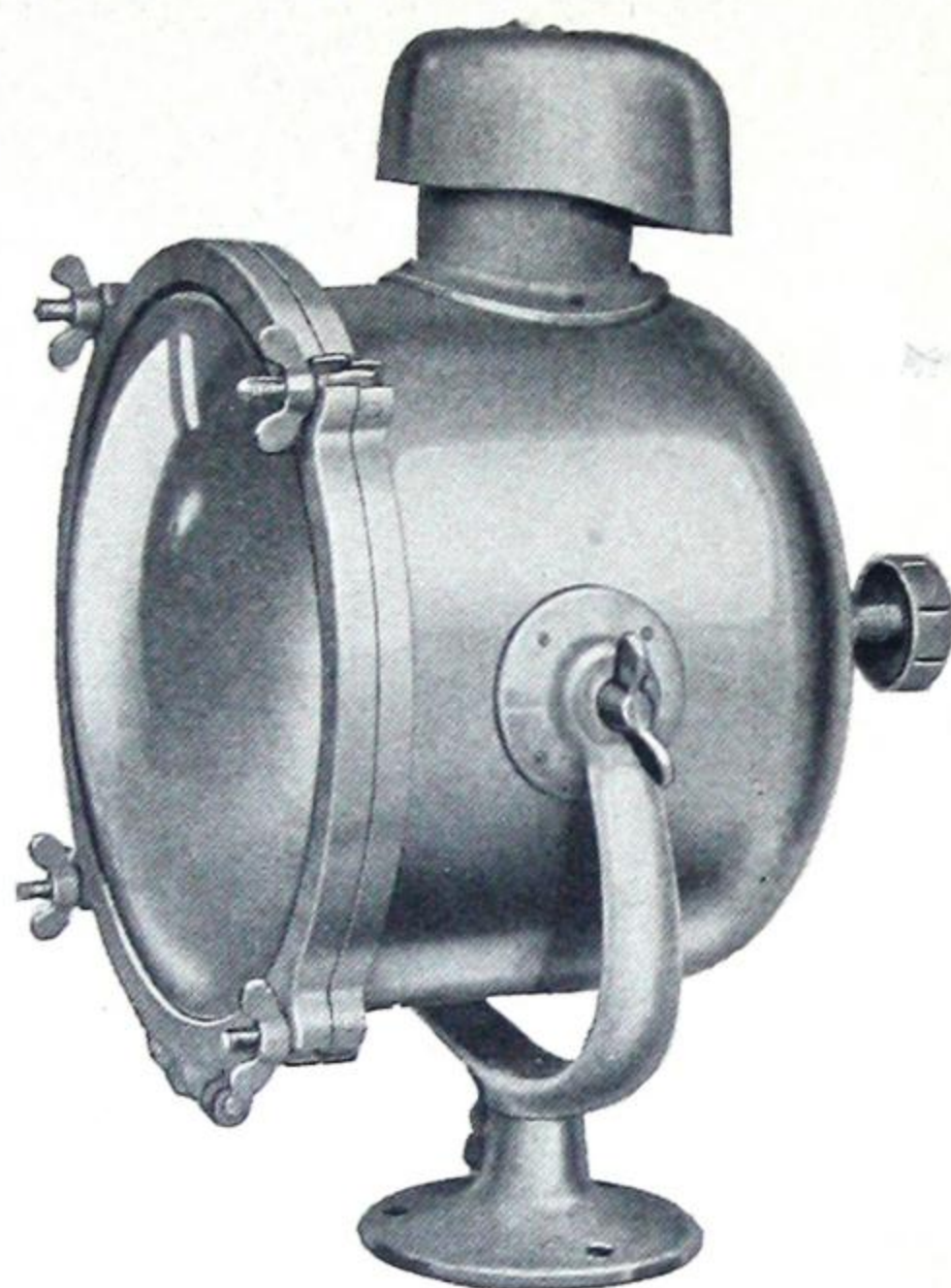
LIST PRICES

HUB-O-LITE box light, Cat. No. 1001, 300 to 500 watt size, complete with chain hangers, but no battens, color frames or lamps, \$12.00.
 HUB-O-LITE box light, Cat. No. 1002, same as Cat. No. 1001, but equipped with pipe clamp hangers, \$15.00.
 HUB-O-LITE box light, Cat. No. 1003, 1000 to 2000 watt size, complete with chain hangers, but no battens, color frames or lamps, \$18.00.
 HUB-O-LITE box light, Cat. No. 1004, same as Cat. No. 1003, but equipped with pipe clamp hanger, \$20.00.

Flood Lights

Outside Flood Lights

OUR outside flood light fulfills the need for a low priced unit that will give a great amount of light for pageants, building facades, and similar places where brilliant illumination of a large outdoor area is desired.



To get the maximum amount of life out of the lamp, an unusual degree of ventilation is provided. As a result, this unit is the lowest in upkeep of any lamp of its class. The many improvements make it ideal for the vigorous service to which this type of lamp is subjected. The housing is made of cast aluminum. The cover is held in place with wing nuts over a weatherproof gasket. The mounting stand is of cast aluminum, with a bracket stud to fit 1/2-inch standard pipe thread.

The reflector is made of a newly developed non-tarnishable metal, that is guaranteed not to tarnish or lose its efficiency in service. It is parabolic in shape, and has many times the reflecting power of those used in other flood lights. A simple focusing device in the rear gives unusually accurate control of the beam. For color lighting effects we provide color lenses to replace the lens regularly furnished. Our engineers will assist in working out new and startling color effects.

LIST PRICES

Cat. No. 1600, for G-40, 300 to 500 watt lamp, complete, \$45.00
Cat. No. 1610, Blue color lens for above flood light, \$5.00.
Cat. No. 1611, Green color lens for above flood light, \$5.00.
Cat. No. 1612, Red color lens for above flood light, \$5.00.
Cat. No. 1613, Amber color lens for above flood light, \$5.00.
Cat. No. 1614, Canary color lens for above flood light, \$5.00.

Inside Flood Light Units

OUR interior flood light unit is probably the simplest of its kind on the market today. The reflector is the same style used in our outside flood light, but is finished on the outside with a soft green. A special housing is mounted over the Mogul lamp socket to provide adequate ventilation and a simple focusing device provided for control.

Each is furnished with a telescopic stand with a wide floor base which permits raising and lowering the light over a wide range. An adjustable fitting enables the lamp to be set at any angle desired. We furnish them in two styles with two kinds of mounting, both using the type C PS-300 or 500 watt bulb. Type A gives a strong concentrated spotlight beam, while type C gives a broad flood over a wide area. A special feature of this flood light unit is the simple color frames for color mediums across the front of the lamp. The units are furnished completely wired with asbestos leads and 25 feet of flexible stage cable.



LIST PRICES

Cat. No. 1620, Type "A" with strong concentrated beam complete with telescopic stand, one color frame and stage cable, \$35.00.
Cat. No. 1621, Type "C" with broad flood beam complete with telescopic stand, one color frame and stage cable, \$35.00.
Cat. No. 1622, Type "A" with strong concentrated beam, complete with clamp for wall mounting as shown, and one color frame, \$30.00.
Cat. No. 1623, Type "C" with broad flood beam, complete with clamp for wall mounting as shown, and one color frame, \$30.00.
Cat. No. 1624, Spill Ring for above flood lights, \$3.00.

The Electrical Folks for Theatrical Folks

Signs and Attraction Boards

THE problem of dressing up the front door of the theatre with attractive signs and announcement boards has been one that theatre managers, as well as those interested in civic affairs, have given considerable thought, especially in communities where a conglomeration of nondescript signs has made the main thoroughfares an eyesore, and given the City Beautiful movement a decided setback. A poorly designed sign does not court public favor for the theatre.

In the past few years we have spent considerable effort in an exhaustive study of this problem, with the result that the HUB-O-LITE attraction boards really attract because of their unusual artistry and pleasing outlines. This has involved the psychology of light and color, the effect of moving lights upon the subconscious mind, and the extent to which a sign, standing in a blaze of electric glory, transmits the idea of beauty inside the theatre into the mind of the passerby.

An electric sign, to be a sign in every sense of the word, should favorably impress and attract people by the artistic beauty of its design and the attractiveness of its display. Not only that, but, in this day of many electric signs, the really attractive sign must stand out prominently from those around it.

The intensive study of electric signs by our sign department has resulted in the selection and training of an art department that is unusually qualified to advise on sign construction and work up distinctively unusual designs. Our sign experts are prepared to deal individually with the problem of an effective design that confronts every theatre owner or engineer.



We have incorporated the newest and latest ideas in sign construction. Our art glass and sign painting departments are manned by masters of that profession. Every job that leaves our shop is fully up to the HUB ELECTRIC COMPANY standard of excellence in every respect.

A great deal of care has been taken in designing these signs to provide them with a surplus of mechanical strength to withstand the most vigorous weather conditions. The electrical work is in accordance with the latest approved practices. Every piece of material is carefully selected. The paramount idea is to provide a sign of long life with a minimum amount of maintenance.

We invite the correspondence of engineers. Our entire sign department is at your service and they will be glad to give prices and any additional information required.

Attraction Board Letters

An all metal attraction board letter finished attractively in two colors. Colors baked on with porcelain enamel, giving a rust proof everlasting letter, easily cleaned. Write for prices on complete sets, giving exact size of letter required.

We are prepared to furnish an entire font of letters sufficient for signs of various sizes and can provide a storage case for placing on the roof of the marquee if desired.



The Electrical Folks for Theatrical Folks

Aisle Lights

THE aisle lights supplied by the Hub Electric Company are absolutely the last word in aisle lighting. One of the most impressive and essential items to the comfort of patrons is an aisle light that really assists people in finding a seat by suffusing the aisle with a soft radiant glow. Each light is equipped with a set of louvers that break up the rays emanating from the bottom of the unit. All the rays are deflected to the floor and the perfected design absolutely eliminates the possibility of annoyance to any person already seated.

These aisle lights are furnished in Red, Green and Bronze finish. Special finishes can be obtained upon request at a slight additional cost. They are designed to fit directly under the arm of the aisle chair, arranged for "BX" wiring connections, and are furnished in two general types, one plain, the other with an illuminated disc bearing the seat or aisle number on the top. Furnished in right and left mountings.

LIST PRICES

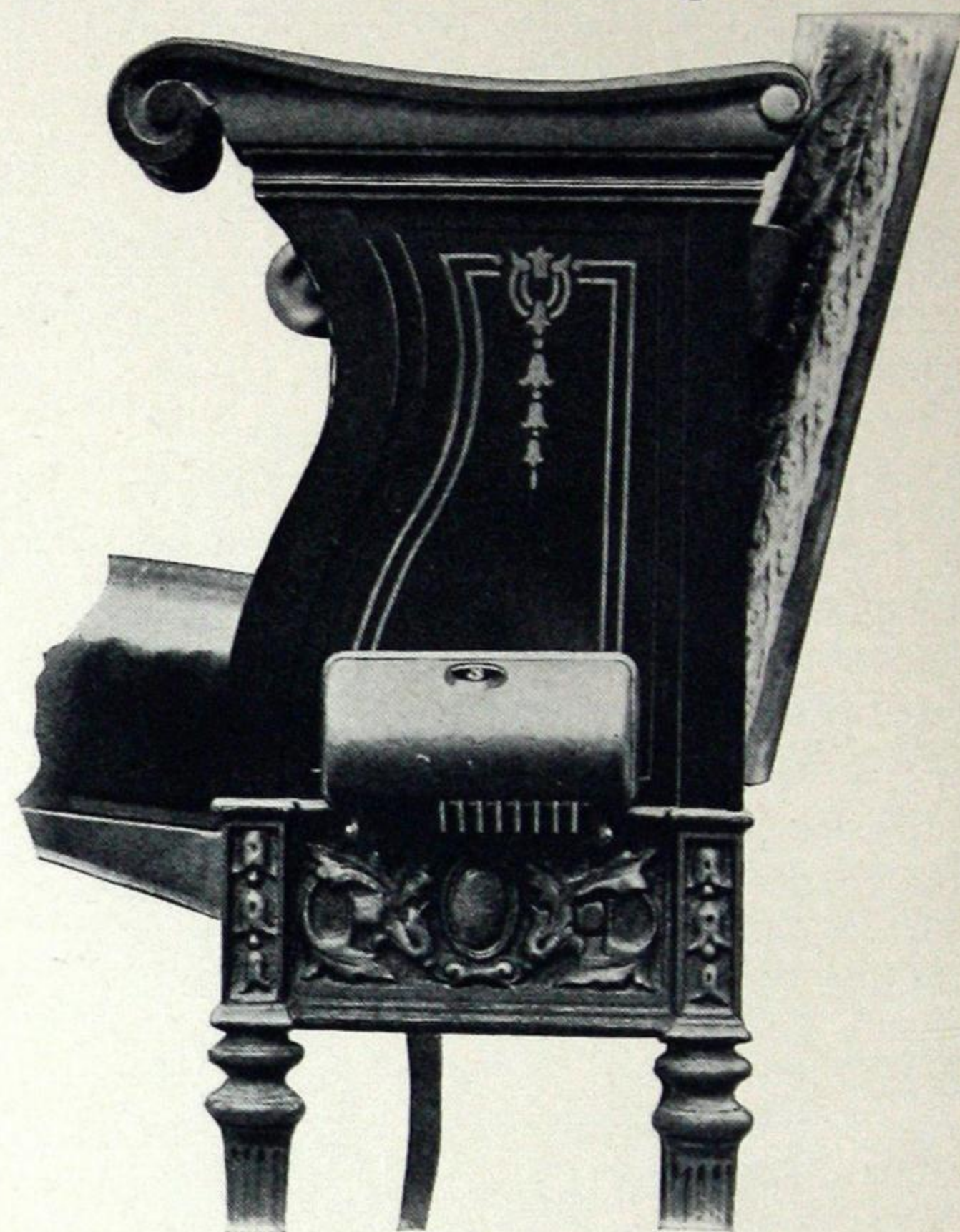
Cat. No. 1800, Aisle light for right side of the aisle as specified above, without number disc, \$4.00.

Cat. No. 1801, Aisle light for left side of the aisle as specified above, without number disc, \$4.00.

Cat. No. 1802, Aisle light for right side of the aisle as specified above, with number disc, \$5.00.

Cat. No. 1803, Aisle light for left side of the aisle as specified above, with number disc, \$5.00.

NOTE: Be sure to specify right or left mounting, and finish desired.



Louver Lights

HUB-O-LITE Louver Lights have been designed to answer the need for a simple, efficient flush type lighting unit for stairway and aisle illumination. They are equipped with a removable front plate approximately $8\frac{1}{2} \times 5$ inches, stamped with especially designed louvers that direct all the light toward the floor. Medium

screw base receptacles are furnished for 40 watt lamps, housed in a special heavy gauge galvanized sheet iron box $7\frac{3}{4} \times 4\frac{1}{2} \times 3\frac{1}{2}$ inches deep, with $\frac{1}{2}$ -inch knockouts on sides, rear and bottom. This unit can be furnished for vertical or horizontal mounting. Furnished complete without bulbs.



The standard finish is white enamel. Other finishes can be furnished on request at slight additional cost.

LIST PRICES

Cat. No. 1850, Louver light, complete, as specified above, white enamel finish for horizontal mounting, \$6.00.

Cat. No. 1851, Louver light, complete, as specified above, white enamel finish for vertical mounting, \$6.00.

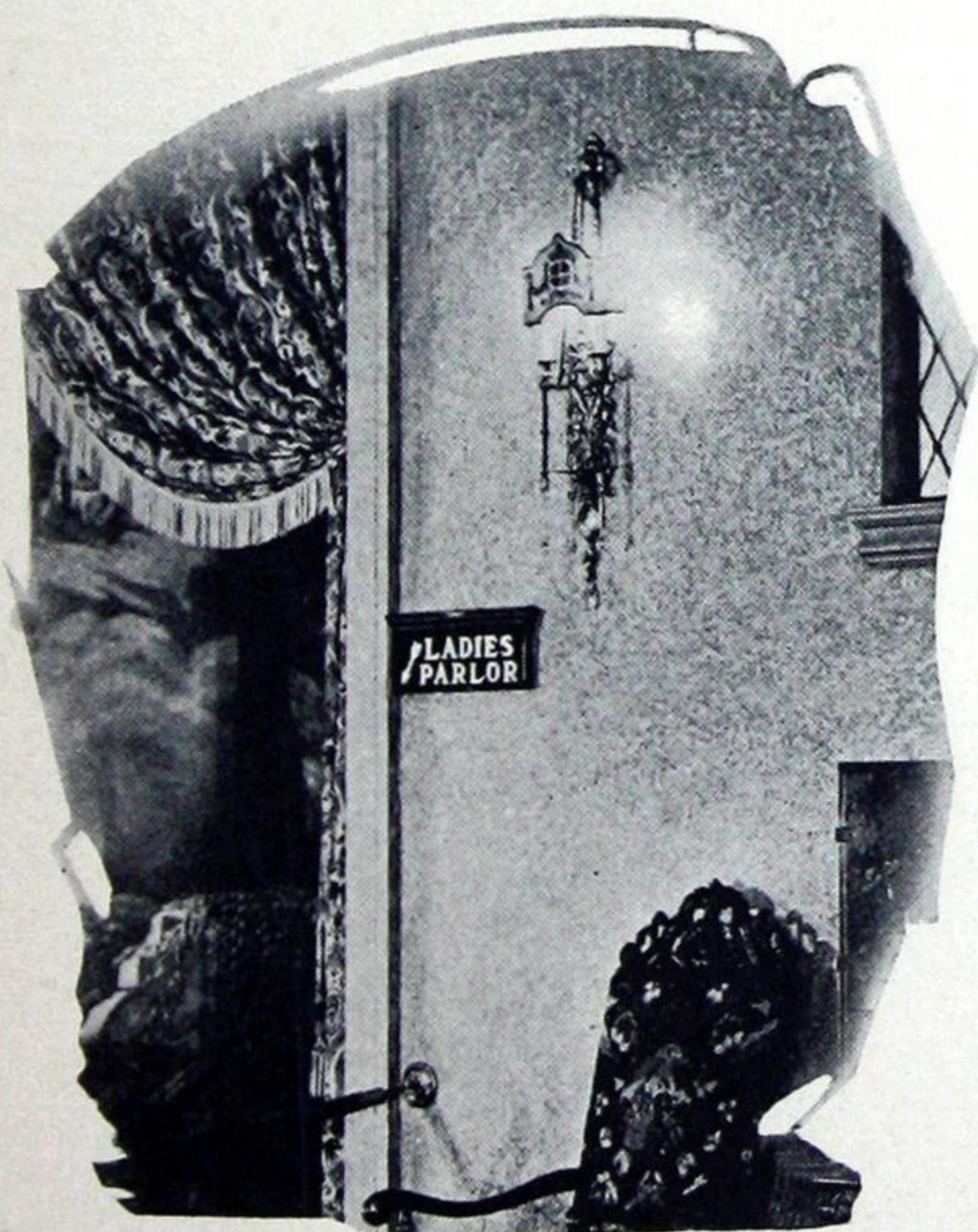
Direction Signs

OUR illuminated direction signs possess such an unusual degree of artistic beauty that they blend perfectly into the most ornate building interiors as a part of the decorative scheme. With the new construction that we have adopted we are producing a sign that is legible at a great distance, with a very pleasing effect due to the absolute absence of glare.

The sign is made of a piece of Hub-O-Lite glass, especially selected and tested for color and density. The letters are raised upon the glass against a background of opaque bronze of any color desired. The selected Hub-O-Lite glass transmits pure white light in much greater quantity than a sign made of any other kind of glass.

The frames are made in all styles and designs. We are prepared to furnish them with an arm, with a stand or pedestal, or we can equip them with a heavy bronze frame for attaching direct to the wall. They are made in single and double face and in a variety of shapes, designs and finishes. Maintenance charges are reduced to a minimum, particularly in the matter of lamps, since this sign uses a standard 25 watt type B bulb mounted in the base of the frame, instead of a short life tubular Mazda bulb. A powerful mirror metal reflector behind the lamp further adds to its efficiency. Very unique and beautiful effects are obtained by placing a glass color screen between the base of the opal and the light.

Prices and data will be furnished upon request.



Exit Signs



This sign is made in two styles and two sizes, and is adaptable to either gas or electricity, although no fittings for either are included. The

OUR No. 2000 type Exit signs have proven unusually popular with architects and engineers desiring a good quality, fine appearing, serviceable Exit sign at a comparatively low price.

frame is $4\frac{1}{2}$ inches deep, is made of sheet steel and finished in bronze. The sign is made of glass white letters on a red background. The single face sign is the most popular, but we furnish them in two, three and four face signs as well.

LIST PRICES

Single face sign, Cat. No. 2000.
Less than dozen lots, 8x10 inches, \$2.00.

Cat. No. 2010, 10x12 inches, \$2.40.

Cat. No. 2001, glass on four sides, 8x10x $4\frac{1}{2}$ inches.
Lots of 12, \$6.00 each.

Cat. No. 2011, glass on four sides, 10x12x $4\frac{1}{2}$ inches.
Lots of 12, \$7.60 each.



beauty to any theatre auditorium or public place. The panel is made of glass, approximately $8\frac{1}{2}$ x- $15\frac{1}{2}$ inches and surrounded by an ornamental frame, beautifully finished in bronze and mounted

OUR medium priced Exit signs fulfill all requirements of an ornate well designed Exit sign that will add a touch of real

on one of our standard steel Exit sign boxes. The letters and ornamental border are of red glass, raised against an opaque bronze background producing the word "Exit" with starting brilliancy. Mounts on steel box $16\frac{1}{2}$ inches wide, 10 inches high and 4 inches deep.

LIST PRICES

Cat. No. 2060, flush mounting arranged for electric lighting, electrical fittings included, \$16.50.

Cat. No. 2061, flush mounting arranged for gas lighting, gas fittings included, \$16.50.



puts them in a class absolutely by themselves.

HUB-O-LITE De Luxe art glass Exit signs are by far the most beautiful artistic Exit signs ever developed. Their beauty, along with their rugged substantial mechanical construction,

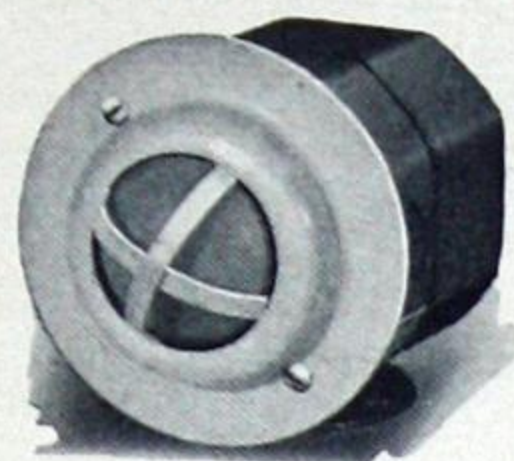
This is a sign that will blend itself into the artistic decorations of the auditorium as a part of the building, and can be furnished in any combination of colors and designs. We invite inquiry from all those interested in something unusual in this type of equipment.

LIST PRICES

Cat. No. 2050 arranged for either flush or wall mounting, prices on application.

Flush Wall Lights

THESE flush wall lights have been widely used as signal lamps and for giving general illumination over small areas where the flush type lighting unit is desirable.

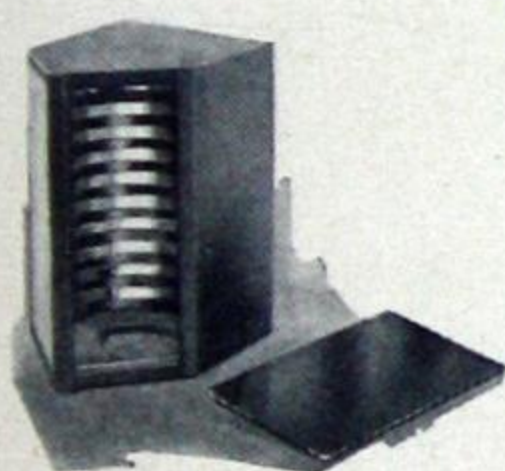


Their unique construction furnishes an inexpensive, efficient unit. They are furnished ready for mounting on a 4-inch outlet box. 15 or 25 watt voltage Mazda lamps are used. Finished in white enamel. Other finishes upon request, at a slight additional charge.

LIST PRICES

Cat. No. 1860 Wall light unit complete as specified above, \$5.00.

Color Reflector



HUB-O-LITE type B color reflectors, installed in footlights or borderlights using type B lamps, effectively does away with the old troubles incidental to superficially colored lamps.

A scientifically designed metal reflector is mounted in the back of a housing and the light reflected from its powerful surface through the prismatic shaped colored glass medium with great brilliancy. Simple, inexpensive and lasting.

LIST PRICES

Cat. No. 1870, Type "B" Red color reflector for 60 watt lamps, \$3.00.

Cat. No. 1871, Type "B" Amber color reflector for 60 watt lamps, \$3.00.

Cat. No. 1872, Type "B" Blue color reflector for 60 watt lamps, \$3.00.

Cat. No. 1873, Type "B" Green color reflector for 60 watt lamps, \$3.00.

Cat. No. 1874, Type "B" Clear color reflector for 60 watt lamps, \$3.00.

Aisle Lights

HUB-O-LITE floor lights are very unusual in design and construction. At present they are used in a great many prominent theatres throughout the country as aisle lights. The light source is entirely concealed and the light rays so deflected that that practically all of the illumination is on the floor with an



absence of glare in the eyes of the persons near them. The units are made of pressed steel and are practically indestructible. The lamp can easily be replaced and the housing so constructed that the lamp is well guarded from accidental breakage. Each one will illuminate approximately 50 square feet of space. They are arranged for mounting directly on top of a standard 4-inch outlet box.

LIST PRICES

Cat. No. 1820, Floor light complete as detailed above without bulbs, \$4.00.

Outside Exit Lights



OUR outside exit lights have been adopted as standard in many theatres for use in alleyways, courtways, outside passages and fire escapes. The same general type of construction is used in them as is used in our floor light catalogue No. 1820. Their construction affords absolute protection to the light bulb against breakage, which not only affects a saving in the maintenance charges, but affords the protection of light at all times just where it is needed. Can be used on gooseneck or straight fitting.

LIST PRICES

Cat. No. 1830, Outside exit light unit complete as specified above, \$10.00.



Pipe Benders

WE WISH to present to our contractor friends a very unusual, simple, tool for bending pipe that has been used for years by many of the largest electrical construction companies with remarkable results. The Star pipe bender is an inexpensive, unbreakable tool with no parts to get out of order and will make perfect, uniform pipe bends with a great saving in time and money. They are easily attached or removed, to a standard pipe vise, simple to operate and so small that workmen can carry them in their tool bags. They will bend pipe up to one inch without kinking or splitting the pipe.

List Prices

Cat. No. 20, Pipe Bender for Crane No. 1 pipe vise, \$3.00.
Cat. No. 21, Pipe Bender for Crane No. 2 and Reed No. 2 pipe vise, \$3.00.



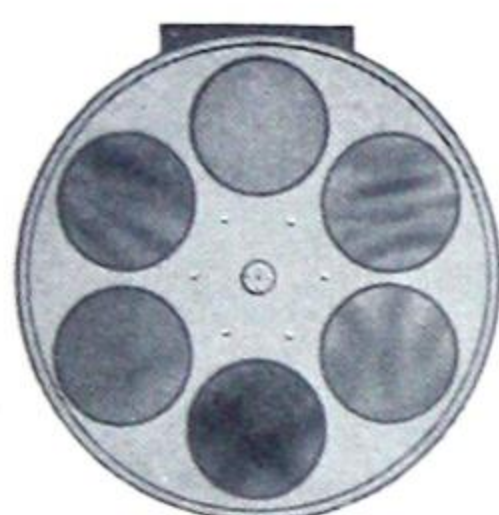
Terra Cotta Sockets

OUR terra cotta sockets absolutely eliminate the marring and disfigurement of the terra cotta work on building facades when installing outline lighting. These sockets are a departure from the regular form of sockets used for this purpose, inasmuch as it is possible to remove them at any time for inspection without impairing the usefulness of the socket or damaging or touching the wiring.

Installation costs are considerably reduced by their ease of installation. The conduit runs are equipped with a standard outlet box directly behind the opening in the terra cotta, the wires pulled in and connections made to the socket outside wall. When the socket is placed in position a machine screw inside the socket shell spreads two dogs at the rear, which engage the back of the opening and hold the socket securely in place, making a tight, waterproof job.

List Prices

Cat. No. 25, in 100 lots, \$0.80 each

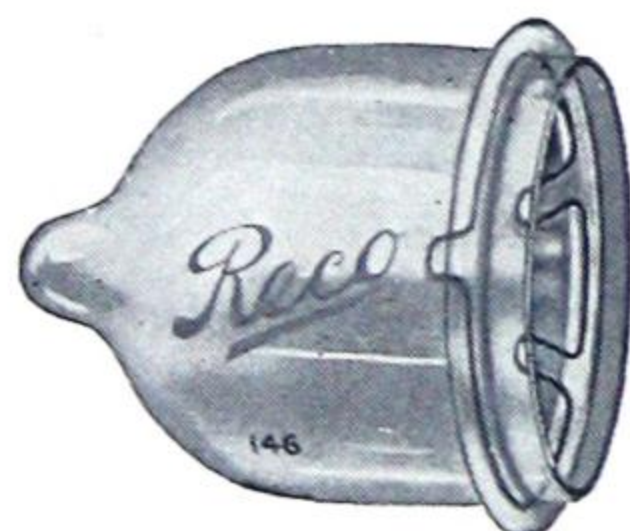


Color Wheels

HUB-O-LITE Color Wheels are especially designed to mount on the front of spotlights and used for changing the color of the projected light. The frame is made of heavy metal equipped with a device to fit the sliding grooves on the spotlight lamp house for holding it in place. They are designed to hold several colors and any combination can be furnished. One outstanding feature of our unit is the ease with which the gelatine color mediums can be replaced.

List Prices

Cat. No. 70, HUB-O-LITE color wheel with five colors for 5-inch or 6-inch spotlights, \$6.50.
Cat. No. 71, HUB-O-LITE color wheel with seven colors, for 5-inch or 6-inch spotlights, \$8.50.
Cat. No. 72, HUB-O-LITE color wheel with five colors, for 8-inch spotlights, \$12.00.



Color Hoods

NATURAL blown glass color hoods for color effects on electric light bulbs on signs, exit lights and on the stage. The color hood snaps over the white bulb with a positive holding device. Regularly furnished in ruby, green, canary, amber, blue, opal and special colors upon request.

List Prices

S14 for S14 5-watt or 10-watt bulb, each, \$0.22
S19 for S19 25-watt, 40-watt or 50-watt bulb, each, \$0.50.
P19 for P19 25-watt or 50-watt mill type bulb, each, \$0.40.

Lamps

WE ARE distributors of Edison Mazda lamps, and carry an especially large stock of those used in theatrical lighting, consequently we are able to guarantee shipment as soon as your order is received.

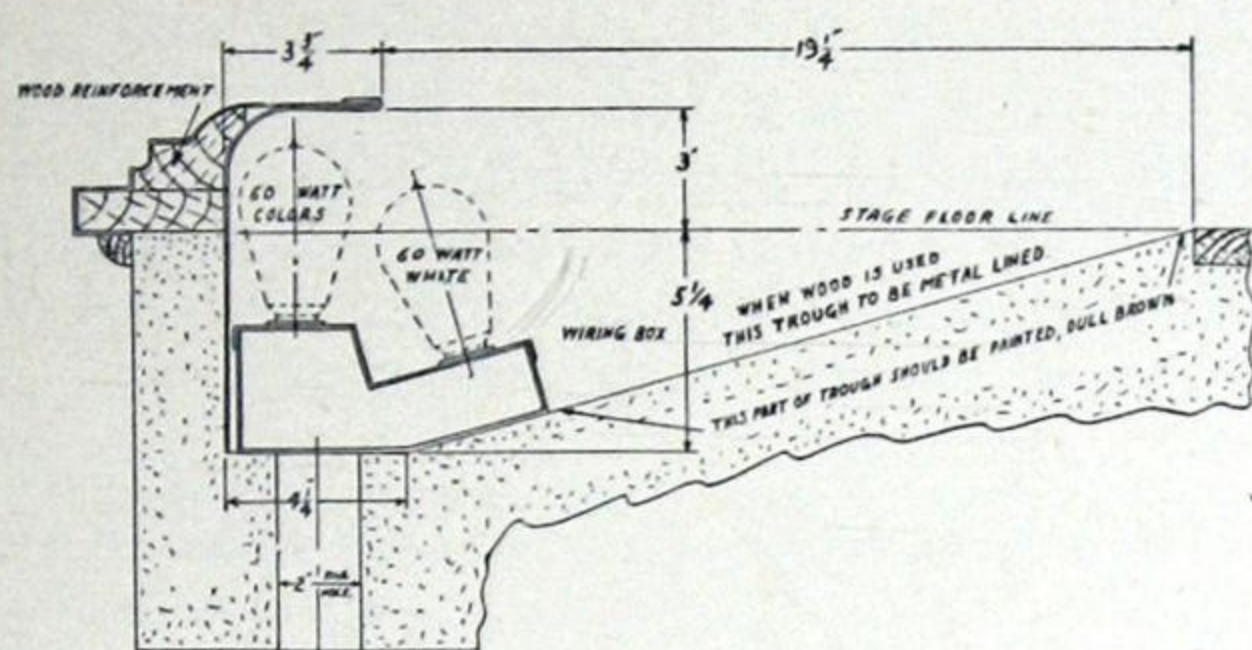
Mazda type C—PS-25 clear	150 watts, 115 volts, clear	\$00.60 each
Mazda type C—PS-30 clear	200 watts, 115 volts, clear	.80 each
Mazda type C—PS-35 clear	300 watts, 115 volts, clear	1.25 each
Mazda type C—PS-40 clear	500 watts, 115 volts, clear	2.00 each
Mazda type C—PS-52 clear	750 watts, 115 volts, clear	3.50 each
Mazda type C—PS-52 clear	1000 watts, 115 volts, clear	3.75 each
Mazda type C—G-30 clear	250 watts, 115 volts, clear, Projection Lamps	1.75 each for Spotlight use
Mazda type C—G-30 clear	400 watts, 115 volts, clear, Projection Lamps	3.00 each for Spotlight use
Mazda type C—G-40 clear	500 watts, 115 volts, clear, Projection Lamps	3.25 each for Spotlight use
Mazda type C—G-40 clear	1000 watts, 115 volts, clear, Projection Lamps	6.75 each for Spotlight use
Mazda type C—G-40 clear	1500 watts, 115 volts, clear, Projection Lamps	9.00 each for Spotlight use
Mazda type C—G-48 clear	2000 watts, 115 volts, clear, Projection Lamps	13.00 each for Spotlight use

We are able to furnish on short notice any size or style of miniature lamp used for special effects. We are able to furnish them regardless of how small they must be.

Prices subject to change without notice.

Specifications

The following specifications are written for the guidance of engineers when writing specifications for theatres



Footlights

TYPE B FOOTLIGHTS as described on page 10.

The electrical contractor shall furnish and install suitable footlight troughing 000 feet long, made of No. 20 gauge galvanized iron, in what is commonly known as the 2-row type of construction, as manufactured by the Hub Electric Company of Chicago. The lamps in the back row shall be placed on three inch centers and wired for two colors, and those in the front row placed on six inch centers and wired for white only. All receptacle connections shall be soldered and insulated with compound, and all other connections soldered and taped. The wiring shall be carried into the trough through a flexible metallic conduit, so that the trough may be removed for cleaning without disturbing the connections.

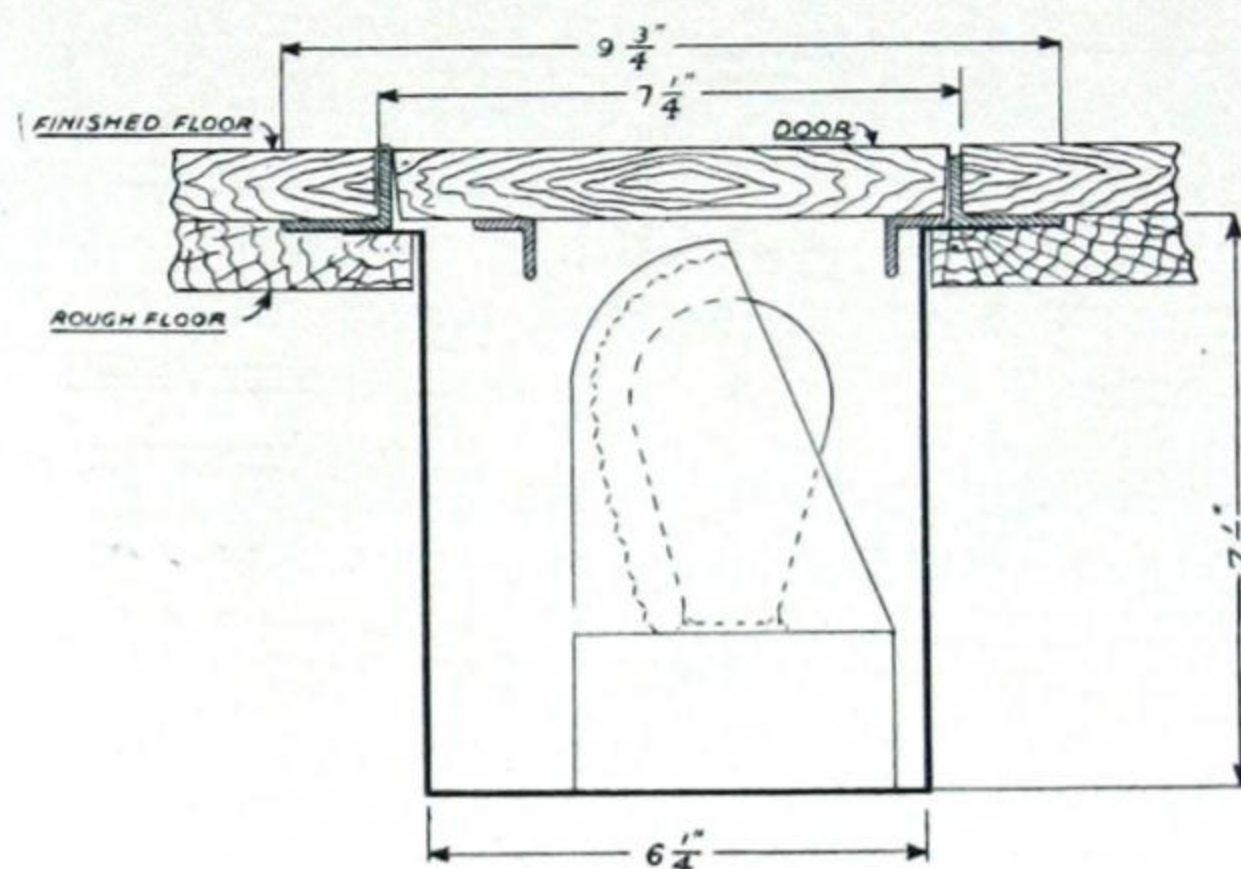
The following number of lights shall be provided for:

-white 60 watt type B
-red 60 watt type B
-blue 60 watt type B

RITE-LITE FOOTLIGHTS as described on page 11.

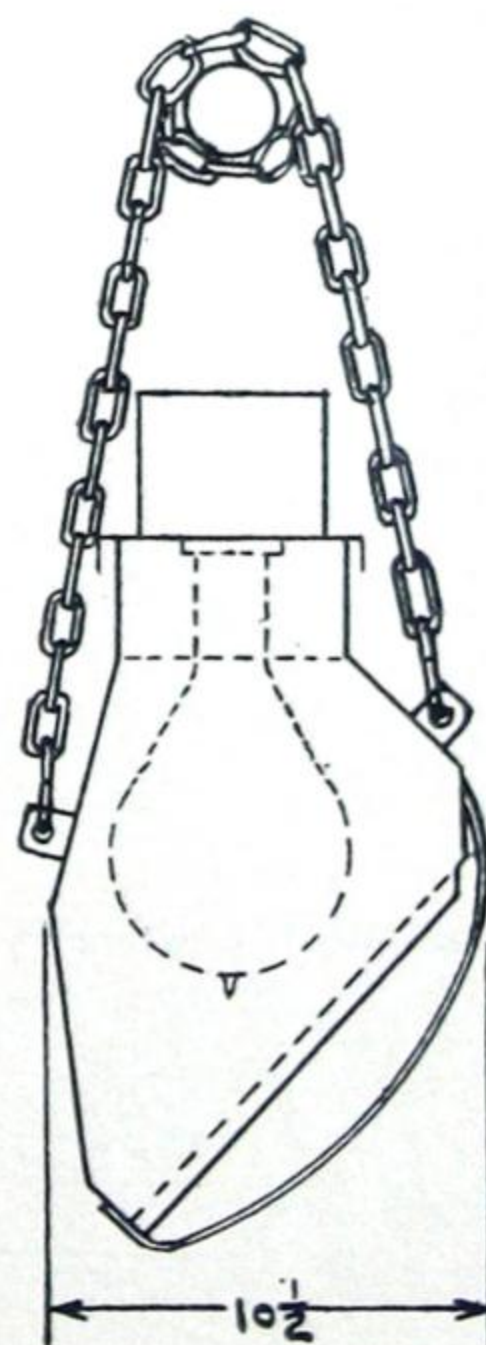
Outline dimensions on page 11.

The Contractor shall furnish and install footlight troughing of the RITE-LITE type as manufactured by the Hub Electric Company of Chicago. The lamps shall be wired for colors as specified, with the white lights in the top row and the colored lights in the bottom. It shall be designed for use with 50 watt mill type lamps, and a suitable reflector to direct all the light to a useful plane. (Note:—S-19-60 watt lamps can be specified if desired.) All receptacle connections shall be soldered and insulated with compound and all other connections soldered and taped.



VANISHING FOOTLIGHTS as described on page 12.

The Contractor will furnish and install sections of vanishing footlights complete with trap door, wired with asbestos covered wire and connected for three color control from the stage control board. These footlight units shall be as manufactured by the Hub Electric Company of Chicago, constructed of No. 20 gauge steel with mirror metal reflectors. Each section shall be equipped with 18 receptacles wired for three colors and shall be so arranged that there will be no possibility of the lights remaining burning when the door is closed. All exposed surface shall have two coats of heat resisting enamel. Sockets shall be flush porcelain compounded and soldered. The following number of lights will be provided:



TYPE C BORDERLIGHTS as described on page 4.

The Contractor shall furnish and install complete HUB-O-LITE type C borderlights, as manufactured by the Hub Electric Company of Chicago. These borders shall be constructed of No. 20 gauge galvanized iron finished on the outside with black heat-resisting enamel, equipped with Mogul receptacles and wired with No. 12 wire. The lamps shall be mounted on 12-inch centers and each lamp placed in a separate compartment equipped with HUB-O-LITE mirror metal reflectors and suitable grooves for receiving color frames. Each border

shall be wired for three colors. The length of each border and the number of lamps in each is given below. In addition there shall be a separate circuit running to the center light of each border to feed the work light controlled by a separate switch on the stage switchboard. The borders shall be furnished complete with all necessary chain hangers and giant strain insulators, and with HUB-O-LITE non-breakable glass color slides. They shall be hung in given distances down the stage. All necessary rigging, ropes and counterweights shall be furnished by another contractor. Cable feeders shall be connected to the junction boxes on the gridiron, and shall be of sufficient length to allow the borders to be lowered within five feet of the stage.

Each border shall conform to the following specifications as to length and number of lights:

.....white 300 watt type C.
red 300 watt type C
blue 300 watt type C
work light
feet overall length of each

TYPE A BORDERLIGHTS

The Contractor shall furnish and install complete..... HUB-O-LITE A borders as manufactured by the Hub Electric Company of Chicago. They shall be constructed of No. 20 gauge galvanized iron, finished on the outside with heat-resisting enamel. The lamps shall be mounted on.....inch centers and equipped with a mirror metal reflector so designed that the spherical candle power of the lamp will be projected to a useful plane. There shall be a separate circuit running to the center light of each border to feed the work light controlled by a separate switch on the stage board. They shall be furnished complete with all necessary chain hangers and giant strain insulators, and shall be hung in given distances down the stage. All necessary rigging, ropes and counterweights shall be furnished by others. Cable feeders shall be connected to the junction boxes as shown on the plans and shall be of sufficient length to allow the borders to be lowered to within five feet of the floor.

STAGE POCKETS as described on page 14

For dimensions see page 15

The Contractor shall furnish and install where shown on the plans, gang stage pockets as manufactured by the Hub Electric Company of Chicago. These pockets shall be equipped with 50 amp. receptacles for.....colors and one for an arc lamp, each color clearly marked on the plate. Each shall be equipped with a pilot lamp that will light

when the box is opened for illuminating the interior and shall be so arranged that a colored light indication showing the color of each receptacle will be given when the pocket is open. These pockets shall be furnished complete with receptacles and plugs and shall be set flush on the stage floor.

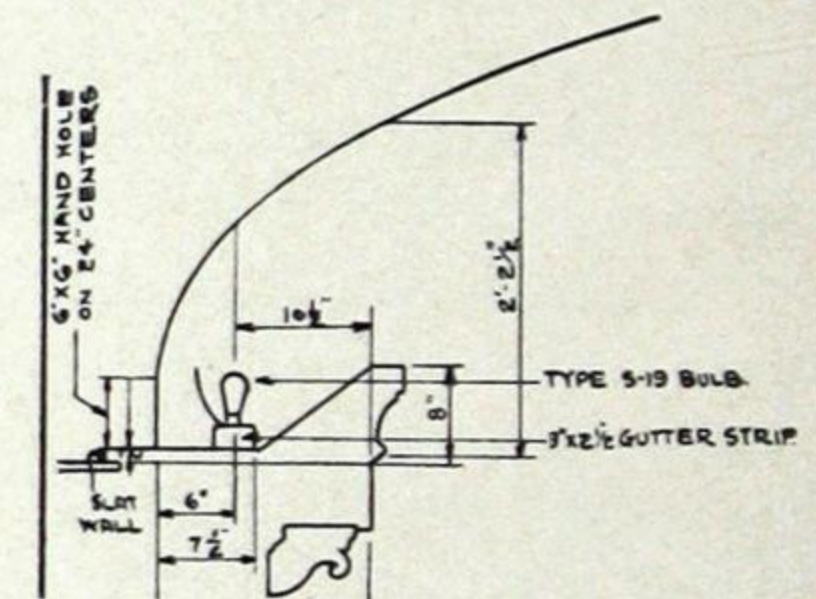
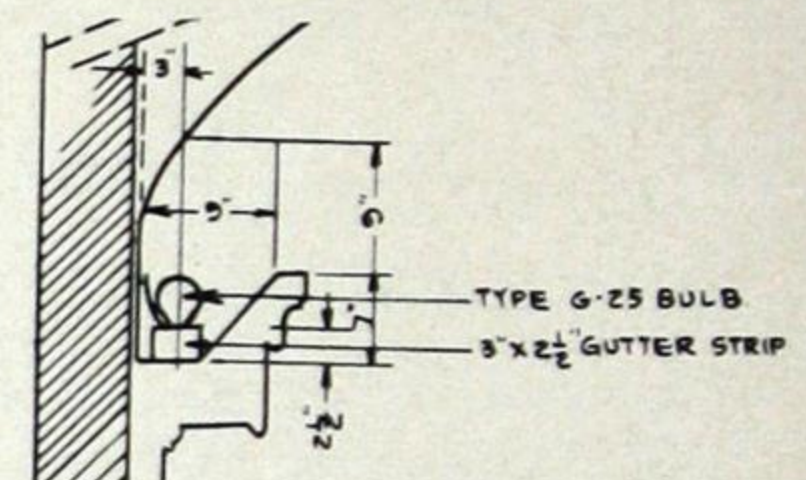
WALL POCKETS as described on page 15

The Contractor shall furnish and install where shown on the plans,.....gang wall pockets as manufactured by the Hub Electric Company of Chicago. They shall be equipped with 50 amp. receptacles and individual self-closing door over each. The color control for each receptacle shall be clearly marked on the outside.

COVE TROUGHING as described on pages 16 and 17

In the space provided in the coves around the various recesses in the auditorium ceiling or side walls, the contractor shall furnish and install feet of HUB-O-LITE cove troughing, as manufactured by the Hub Electric Company of Chicago, with HUB-O-LITE removable mirror metal reflectors for watt lamps, properly adjusted to evenly and smoothly illuminate the recess. The lamps shall be wired for three colors as follows:

.....white.....watt
redwatt
bluewatt



EXIT SIGNS as described on page 26.

Cat. No. 2000

The Contractor shall furnish and install Exit Signs, as manufactured by the Hub Electric Company of Chicago, complete in the position shown on the drawing. The panel of these signs shall be made of glass surrounded by an ornamental frame finished in bronze and arranged for flush mounting on standard steel exit sign boxes. The letters shall be of red glass raised against an opaque bronze background, with an ornamental border to match, surrounding the word "Exit."

Cat. No. 2060

The Contractor shall furnish and install outlets as shown on plan for exit signs and shall equip each with a HUB-O-LITE Exit Sign as supplied by the Hub Electric Company of Chicago. These signs shall consist of a panel of red glass with the word "Exit" placed thereon in white letters and mounted on a suitable bronze finished steel exit sign box.

H U B E L E C T R I C C O M P A N Y

Cat. No. 2050

The Contractor will furnish and install Exit Signs as manufactured by the Hub Electric Company of Chicago, complete in the position shown on the drawings. The panel of these signs shall be made of inlaid art glass construction and suitably mounted on an ornamental frame, finished in bronze and arranged for flush mounting on standard steel Exit Sign boxes.

OUTSIDE EMERGENCY LIGHTS as described on page 27.

The Contractor shall furnish and install outlets for the outside emergency lights, as shown on the plans, and shall equip each with a HUB-O-LITE emergency bracket, as manufactured by the Hub Electric Company of Chicago, with a HUB-O-LITE guard around the lamp to protect the lamp from breakage.

DIRECTION SIGNS as described on page 25.

The Contractor will furnish and install outlets as shown on the plans, or as directed by the architect, and equip them with HUB-O-LITE crystal exit signs, as manufactured by the Hub Electric Company of Chicago. The inscription on the signs shall be submitted to the architect for approval.

AISLE LIGHTS as described on page 24.

The aisle lights shall be of a type suitable for mounting on the ends of the rows of seats, as supplied by the Hub Electric Company of Chicago. They shall be so arranged that all the light will be thrown to the floor, and suitable louvres shall be installed so that no part of the light source will be visible from the stage. Each unit shall have an illuminated disc showing the aisle number.

LOUVRE LIGHTS as described on page 24.

The Contractor shall furnish and install where shown on the plans, HUB-O-LITE LOUVRE LIGHTS for horizontal or vertical mounting, depending on location, or as directed.

AISLE LIGHTS as described on page 27.

The contractor shall furnish and install outlets in the floor for aisle lights as located on the plans. Each outlet shall be equipped with an aisle light unit complete as manufactured by the Hub Electric Company of Chicago, arranged for mounting on the floor on a standard 4-inch outlet box. These units shall be so designed that they will illuminate the floor around them with out glare or light in the eyes of those in the seats or on the stage.



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Balaban & Katz
Publix Theatres
Keiths
Famous Players
Flo Ziegfield
Wm. Fox
S. L. Rothafel

and many others have chosen Hub products for use in their largest theatres in cities thruout the country.

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HUB ELECTRIC COMPANY

NEW YORK

CHICAGO

Factory and Main Office:

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